Nordic Ecolabelling for

Renovation of buildings

Residential, educational, office, and hotel buildings

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Nordic Ecolabelling

Content

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Contact information

In 1989, the Nordic Council of Ministers decided to introduce a voluntary official ecolabel, the Nordic Swan Ecolabel. These organisations/companies operate the Nordic Ecolabelling system on behalf of their own country's government. For more information, see the websites:

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What is a Nordic Swan Ecolabelled renovated building?

A Nordic Swan Ecolabel renovated building is a better choice for both the environment, the climate and for the residents or people using the building. It meets strict obligatory requirements for the renovation, including extraction and production of materials, the demolition and construction process, the use of the building as well as the recycling and waste stages. The requirements promote resource efficiency, reduced climate impact and a nontoxic circular economy. High quality of the renovation and good indoor climate are also promoted.

A Nordic Swan Ecolabel renovated building:

- Has a low energy demand or a significantly reduced total demand for primary energy compared to before renovation.*
- Has a good indoor environment because it meets strict requirements for moisture control and minimised exposure to harmful substances.
- Meets strict chemical requirements for substances harmful to health and the environment – in both the construction materials and chemical building products. This applies to everything from paints and sealants to insulation, vapour barriers and floors.
- Meets requirements that promote circular economy, for instance harmful substances in the existing building are mapped and handled and a material logbook ensures traceability of the building components.
- Meets requirements for construction waste which promote reuse, recycling and other material recovery.
- Is of a high quality through strict requirements for moisture control and the contractor's self-monitoring in the building process.
- Is aligned with the technical screening criteria for substantial contribution to climate change mitigation in the EU taxonomy Annex 1** for renovation of existing buildings (7.2).

* *Except for protected buildings and buildings worthy of preservation covered by the exemption in O7.*

** *Except for Iceland and Norway which has not yet implemented Directive 2010/31/EU and Regulation (EU) 2020/852.*

Why choose the Nordic Swan Ecolabel?

- The licensee may use the Nordic Swan Ecolabel trademark for marketing. The Nordic Swan Ecolabel is a very well-known and well-reputed trademark in the Nordic region.
- The Nordic Swan Ecolabel is a simple way of communicating environmental work and commitment to customers.
- The Nordic Swan Ecolabel clarifies the most important environmental impacts and thus shows how a company can cut emissions, resource consumption and waste management.
- Environmentally suitable operations are better prepared for future environmental legislation.
- Nordic Ecolabelling can be seen as providing a business with guidance on the work of environmental improvements.
- The Nordic Swan Ecolabel not only covers environmental issues but also quality requirements, since the environment and quality often go hand in hand. This means that a Nordic Swan Ecolabel licence can also be seen as a mark of quality.
- The criteria for Nordic Swan Ecolabelling for Renovation of buildings are aligned with the technical screening criteria for substantial contribution to climate change mitigation in the EU taxonomy Annex 1 for Renovation of existing buildings.*

** Except for Iceland and Norway, which has not yet implemented Directive 2010/31/EU and Regulation (EU) 2020/852.*

What can carry the Nordic Swan Ecolabel?

Nordic Swan Ecolabelled renovation of buildings is the result of an active renovation process. It is not possible for existing buildings to be Nordic Swan Ecolabelled without an ongoing renovation process. Only changing the energy system is not considered an active renovation process.

The size and scope of the renovation:

The renovation project must fulfil at least one of the following three options:

1. The estimated total cost of the renovation relating to the building envelope* or the technical building components and systems is higher than 25% of the value** of the building, excluding the value of the land upon which the building is situated.
2. More than 25% of the surface of the building envelope* undergoes renovation.

3. Renovation leads to a reduction of primary energy demand (PED) of at least 30%. Documentation must be done according to the principles in O14, alternative 2.

Documentation for compliance with 1, 2 or 3 must be done in O1.

[*] *The building envelope is the outer structure of the building, i.e. the physical barriers that separate the inside from the outside, land, or unheated space. The building envelope is usually walls, floors/foundation, roof, windows, and external doors.*

[**] *The value of the building should be understood as the cost that a reconstruction of the existing building would amount to.*

Building types that can be subject to Nordic Swan Ecolabelled renovation of buildings

The following building types can be certified as Nordic Swan Ecolabelled renovation according to the criteria for Nordic Swan Ecolabelled Renovation of buildings:

- Buildings classified as residential buildings in the national building legislation.

- Educational buildings, including preschool buildings, kindergartens and day-care centres, schools, universities, and other schools for higher education.

- Office buildings, including all associated facilities in the building.

- Buildings for residential care facilities for people in need of 24-hour health care and service, such as homes for the elderly, nursing homes (NO: sykehjem), hospices, rehabilitation centres, and homes for persons with disabilities. If buildings are nationally classified as residential buildings, they are covered by bullet one.

- Buildings for health centres and clinics that accommodate health consultations, diagnosis and treatment of injuries or ailments from qualified physicians, dentists, chiropractors, physioterapists, etc. Surgical clinics and surgical centres are not included.

- Buildings for hotels or other establishments offering temporary accommodation such as hostels, motels and similar. The following applies for the facilities below:

  a) Restaurants and conference centre buildings that are an integrated part of the hotel or other accommodation must be included in the licence and must fulfil the requirements.

  b) Restaurants and conference centres buildings built as separate buildings can be included in the licence and must fulfil the requirements.

  c) Spa facilities cannot be included in the licence and must be kept separate in the marketing of the licence.

- Buildings accommodating conference centres. The following applies for the facilities below:

  a) Restaurant buildings that are an integrated part of the conference centre must be included in the licence and fulfil the requirements.

  b) Restaurant buildings built as separate buildings can be included in the licence and fulfil the requirements.

- Commercial areas, such as cafés, hairdressers, clothing stores, supermarkets, etc., that are integrated in one of the building types 1-7. The commercial areas may constitute a maximum of 25 % of the total area of the building.

- Buildings that are converted into any of these types of buildings.

Building types that cannot be Nordic Swan Ecolabelled

- Holiday homes and cottages.

- Permanent supplementary buildings, such as garages, refuse depots, bicycle storage rooms, and sheds constructed as separate projects. Supplementary buildings are included in the licence when planned and constructed along with the renovation of main building.

- Separate educational buildings that primarily accommodate laboratories, workshops and similar.

- Ice skating halls, public and private swimming pools.

- Gymnastics halls and sports halls constructed as separate projects.

- Hospitals, surgical clinics and surgical centres.

- Veterinary clinics.

- Separate commercial buildings, retail stores, and shopping centres.

- Factories and other industrial buildings.

Who may be a licensee?

The following can be licensee in the product group Renovation of buildings.

- Contractor

- Building developer

- Property owner

The licensee must take full responsibility for the fulfilment of all requirements. Thus architects, technical consultants, or other parties can only be licensee if they can take full responsibility for all requirements.

How to apply

Application and costs

For information about the application process, various licence types and fees for this product group, please refer to the respective national web site. For contact information see first in this document.

What is required?

The application must consist of an application form/web form and documentation showing that all relevant requirements are fulfilled. Documentation is provided throughout the planning and construction process. Documentation is uploaded and handled in the Nordic Ecolabelling Portal (NEP) and the Supply Chain Declaration Portal (SCDP). For links, please see the respective national web site as mentioned above.

The criteria for Renovation of buildings consists of obligatory requirements, indicated by the letter “O”.

The requirement text describes how the applicant must demonstrate fulfilment of each requirement. The following icons are used:

✉ Enclose

To be awarded a Nordic Swan Ecolabel licence the following must be fulfilled:

- All obligatory requirements must be fulfilled.
- Nordic Ecolabelling must conduct an inspection on the construction site and/or module factory.

All information submitted to Nordic Ecolabelling is treated confidentially. Suppliers can send documentation directly to Nordic Ecolabelling, and this information will also be treated confidentially.

Licence types

Various licence types exist (e.g., base licence or project licence). For details on licence types please contact the relevant national Nordic Ecolabelling office.

Licence validity

The Nordic Swan Ecolabel licence is valid providing that relevant requirements in the criteria are fulfilled and until the criteria expires. The validity period of the criteria may be extended or adjusted, in which case the licence is automatically extended, and the licensee informed. The building is Nordic Swan Ecolabelled according to a specific generation of the criteria.

Revised criteria will be published at least one year prior to the expiry of the present criteria. The licensee is then offered the opportunity to renew their licence.

On-site inspection and other control measures

In connection with handling of the application, Nordic Ecolabelling performs on-site inspection/-s to ensure adherence to the requirements. For such an inspection, data used for calculations, original copies of submitted certificates, test records, purchase statistics, and similar documents that support the application must be available for examination.

Nordic Ecolabelling can require measurements of relevant parameters to verify compliance with national legislation and/or requirements defined in these criteria. If the relevant requirement is not fulfilled, the applicant must pay for the testing and perform corrective measures.

Queries

Please contact Nordic Ecolabelling if you have any queries or require further information. See first in this document for contact information. Further information and assistance (such as calculation sheets or electronic application help) may be available. Visit the relevant national website for further information.

1 What is subject to the requirements?

Buildings, supplementary buildings, and outdoor areas

The Nordic Swan Ecolabel renovated building, remodelled outdoor areas on the plot and any permanent supplementary buildings that are part of the renovation project and that are constructed, renovated, or marketed with the Nordic Swan Ecolabelled renovated main building must fulfil all relevant requirements. Supplementary buildings are refuse-depots, bicycle sheds, storage buildings, garages (both as a separate structure or connected to the building), carports and similar constructions. Communal/shared areas for residents or occupants are included, e.g., gyms and hobby rooms in the building.

Commercial areas making up more than 25 % of the building area such as shop premises, hairdressers, restaurants etc. are exempt from the requirements. Please see the section “What can carry the Nordic Swan Ecolabel?”.

Any bomb shelters in the building must only comply with requirement O2, O3, O4 and O10.

General scope of the material requirements

- The requirements include all materials and products that are incorporated as a part of the renovation and extensions in the Nordic Swan Ecolabel renovated buildings and supplementary buildings included in the renovation project.

- The material requirements apply to all structures above the capillary layer. This includes materials used for insulation of the base plate (above or below the plate) and any radon barrier wherever it is placed.

- Materials used on outdoor areas that are included in the renovation project are covered by relevant requirements. This includes products and construction materials such as decking, fences, pergolas, permanently installed outdoor furniture, playground and park equipment and similar items.

- Installations up to the building are not included. This means, for example, that electrical cables up to the main fuse box are not included.

- Requirements apply to permanently installed fittings, furniture, and trimmings as well as loose fittings and furniture (e.g., wardrobes and lockers) that are included in the renovation project and sold/let with the residential unit or premise.

Exempted areas, materials and products

The following are not subject to any requirement*:

- New materials* installed in technical service areas including lift cabins and lift shafts.

- Garage floors* and floors* in bicycle rooms where there is a need for waterproofing due to a dry level below the floors in question.

- Control units for water, ventilation, and heating.

- Marking paint, marking tape that is removed, cable/pipe lubricant and cleaning agents.

- Sealing foam, formwork oil, etc. used to seal or lubricate casting moulds.

- Touch-up paint for damage to white goods and fittings.

- Products and materials for minor repairs of existing surfaces or other construction components in the building. Each case must be approved by Nordic Ecolabelling.

- Rust protection paint to restore railings and beams after welding and when screw holes have been drilled or similar work.

- Builders' hardware (e.g., locks, handles, hole plates and hinges).

- Nails, screws, nuts, bolts, washers and similar fixings and fasteners.

- Palletising trays, plastic spacers, ground spacers, inflow and outflow pipes for white goods and similar items.

- Temporary products and structures used in the construction but later removed. Examples of temporary products and structures are moulds, struts, tarpaulins, or plastic film temporarily used for weather protection or sealing. However, wooden products are always covered by O37 such as wood in casting moulds.

** The materials used are subject to the logbook requirement O20.*

Any other exemption must be communicated to Nordic Ecolabelling for approval.

Prefabrication

When anything that would normally have been built on site is built in a module/construction element factory the same chemical and material requirements apply. This for instance includes:

- Prefabricated bathroom modules.
- Sandwich elements and other modules for wall, floor, roof or similar.
- Concrete elements (incorporated building products and surface treatment).

Chemical curing products can be used in prefabrication if mixing and application takes place in designated areas and/or with methods and systems protecting from exposure (in accordance with national work environment legislation). Apart from this, these products are not subject to chemical requirements.

Chemical curing is a chemical process that produces the hardening of a polymer material by cross-linking of polymer chains. One- or two-component products, where the curing can depend on various factors such as reactive substances, UV light, heat, humidity.

Industrial surface treatments

Examples where chemical requirements (chapter 8.2) apply:

- Primed and final-coated outdoor wooden panels and boards that are not covered by the bullet below.

Examples where chemical requirements (chapter 8.2) do not apply, but where material requirements on construction products (chapter 8.3 and 8.4) still apply:

- Outdoor wooden facade panels and boards that are primed with a biocidal product (PT8) according to Regulation (EU) 528/2012, if all other coatings (including products used at the construction site) are ecolabelled.

Examples where chemical requirements (chapter 8.2) do not apply, but where material requirements on construction products (chapter 8.3 and 8.4) still apply:

- Pre-painted windows, doors, and interiors (mouldings, kitchen and bathroom fittings, indoor stairs).
- Primed and final-coated indoor wooden panels, boards, and ceilings.
- Fire retardant-treated wood for indoor and outdoor use where the only purpose is to achieve a certain fire protection class.
- Surface-treated steel.

Complete renovations where only the load bearing structure remains

Since it is resource-efficient to reuse the load bearing structure, Nordic Ecolabelling shall not contribute to its demolition if it can be retained. Nordic Ecolabelling leans towards the national regulations for building and construction and the definitions for those regulations. If the construction regulations define a project as being a new-build project, the criteria for new production must be used. If the construction regulations define a project as a renovation project instead, the criteria for renovations must be used.

Renovations that result in increased area (extension)

If the floor space of the building is increased, i.e. the building is extended (by >50 m^2) while it is being renovated, the project is a combination of two criteria documents and will be treated accordingly:

- The renovated section of the building must comply with the requirements in the criteria for Nordic Swan Ecolabelled renovation of buildings.

- The extension section must in addition to relevant requirements in the criteria for renovation of buildings (e.g., material- and quality requirements) meet the following requirements in the criteria for Nordic Swan Ecolabelled New buildings (O89):

    - O2 Points achieved (and related P-requirements)
    - O3 Energy demand of the building
    - O4 Lighting management
    - O5 Energy efficient white goods
    - O6 Climate calculation of the building
    - O7 Cement and concrete
    - O8 Steel production
    - O9 Aluminium production
    - O11 Waste sorting inside the building
    - O31 Assessment of the biodiversity on the plot*
    - O32 Measures to preserve and improve the biodiversity*
    - O33 Management plan for the biodiversity*
    - O34 Acoustics
    - O35 Daylight provision
    - O36 Thermal comfort and overheating
    - O37 Radon (applies only in Finland)
    - O38 Air permeability

* *Only applies when the extension is built at ground level and affects the land use. Only the area affected by construction must be evaluated.*

Extensions smaller than 50 m^2 heated area must only comply with the requirements in the criteria for renovation of buildings (e.g., material- and quality requirements).

2 Alignment with the EU Taxonomy framework

Disclaimer

There are many uncertainties on how EU Taxonomy compliance can be documented as well as uncertainties in the interpretation. Therefore, Nordic Ecolabelling cannot guarantee EU Taxonomy alignment through our criteria for Nordic Swan Ecolabelled Renovation of buildings.

Nordic Ecolabelling does not take any legal responsibility for the (degree of) alignment, nor can a building project or a building material certified with the Nordic Swan Ecolabel (or listed in the SCDP) be claimed as taxonomy aligned based on the Nordic Swan Ecolabelling criteria.

The responsibility for documentation of EU Taxonomy compliance solely belongs to the company who is claiming it.

This section describes how the Delegated Act on the objective climate change mitigation (Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021) is handled in these criteria for Renovation of buildings Specifically, reference is made to the activity 7.2 "Renovation of existing buildings". From here on it will be referred to as "the EU Taxonomy".

The following two tables display how Nordic Ecolabelling assume the EU Taxonomy can be interpreted in relation the criteria for renovation of buildings. This assessment is done to the best of our knowledge and no responsibility is taken on these interpretations.

Nordic Ecolabelling closely follow interpretations of the EU Taxonomy criteria in both the Nordic countries and from EU. In the end, the interpretation is a task for national authorities or other officially appointed bodies.

Implementation strategy

The overall implementation strategy for Nordic Ecolabelling is to:

- Implement the technical screening criteria for significant contribution to climate change mitigation as mandatory requirements in this Nordic Swan Ecolabelling criteria generation 2 in all countries where it is feasible.

- Implement mandatory requirements for those Do-No-significant-harm criteria in generation 2, that are considered relevant and reasonable, and where the delegated act is relatively clear on what is required to fulfil the requirement.

- Do-No-significant-harm criteria that are handled as point requirements in the criteria for Nordic Swan Ecolabelling of New Buildings (gen. 4) are not implemented in these criteria.

- Social minimum guarantees as defined in the EU Taxonomy are not evaluated or covered by these criteria.

- In generation 3 of these criteria (next generation) Nordic Ecolabelling aims to become a tool for documentation of alignment with The EU Taxonomy Climate change mitigation.

The Technical screening criteria are according to the internal assessment done by Nordic Ecolabelling assumed to be handled in the following way (please note the disclaimer in the beginning of this section):

Technical screening criteria in the EU Taxonomy for substantial contribution to climate change mitigation	**Nordic Ecolabelling's evaluation of the screening criteria compared to the criteria for Nordic Swan Ecolabelled Renovation of buildings, generation 2**
7.2.1: "Energy demand" a) The building renovation complies with the applicable requirements for major renovations (298). b) Alternatively, it leads to a reduction of primary energy demand (PED) of at least 30% (299). (298) As set in the applicable national and regional building regulations for 'major renovation' implementing Directive 2010/31/EU. The energy performance of the building or the renovated part that is upgraded meets cost-optimal minimum energy performance requirements in accordance with the respective directive. (299) The initial primary energy demand and the estimated improvement is based on a detailed building survey, an energy audit conducted by an accredited independent expert or any other transparent and proportionate method and validated through an Energy Performance Certificate. The 30% improvement results from an actual reduction in primary energy demand (where the reductions in net primary energy demand through renewable energy so.	The energy performance of the Nordic Swan Ecolabelled building is regulated in requirement O14. DK/SE/FI: Options a) and b) in this requirement are aligned with the two alternatives a and b in the EU Taxonomy in the criteria for Nordic Swan Ecolabelled Renovation of buildings. NO/IS are currently not aligned with the EU Taxonomy. Alternative c) in O14 regarding protected buildings and buildings worthy of preservation is not aligned with the EU Taxonomy. See national details below: Denmark: has implemented Directive 2010/31/EU but is not directly using the definition of major renovation in the legislation. Correspondence with the Danish building legislation authorities indicates that the renovated building must fulfil renovation class 2 (BR18) to be aligned with a) in the EU Taxonomy. Alternative b) can be employed using the system of EPCs, see requirement O14 for details. Finland: has implemented Directive 2010/31/EU and adopted the definition of major renovation. It is interpreted that alignment with alternative a) in the EU Taxonomy is achieved by fulfilling the Ministry of the Environment's decree (4/2013) on improving the energy efficiency of buildings in conjunction with repair and modification works, for the building category in question. Alternative b) can be employed using the system of EPCs, see requirement for details. Sweden: has implemented Directive 2010/31/EU but is not directly using the definition of major renovation in the legislation. It is interpreted that the renovated building must fulfil the energy use equivalent to the maximum permitted in accordance with BBR for new buildings to be aligned with alternative a) in the EU Taxonomy. Alternative b) can be employed using the system of EPCs, see requirement for details. Norway: The authorities are currently working on how the EU Taxonomy can be implemented in Norway. We are following this closely. Norway has not implemented Directive 2010/31/EU. Iceland: has not implemented Directive 2010/31/EU and EPCs are not implemented. EU Taxonomy alignment is not feasible at the moment.

	In conclusion, it is assessed that the documentation required to verify O14 a) or b) for DK, FI and SE can be used as documentation to verify taxonomy compliance. Calculation methods and documentation can be seen in O14.

The Do-No-significant-harm criteria are, according to the internal assessment done by Nordic Ecolabelling, handled in the following way (please note the disclaimer in the beginning of this section):

DNSH criteria in the EU Taxonomy	**Nordic Ecolabelling evaluation of the criteria compared to the Nordic Swan Ecolabel criteria for Renovation of buildings generation 2**
7.2.2.1: Climate Change adaptation The activity complies with the criteria set out in Appendix A to this Annex.	The requirement is not covered by these criteria. The uncertainties related to the interpretation of the requirement is currently considered too high for a mandatory requirement. No point requirements are available in these criteria. Please refer to the criteria for Nordic Swan Ecolabelling of New Buildings for further information on this EU Taxonomy requirement.
7.2.3.1: Sustainable use and protection of water and marine resources Where installed, except for installations in residential building units, the specified water use for the following water appliances are attested by product datasheets, a building certification, or an existing product label in the Union, in accordance with the technical specifications laid down in Appendix E to this Annex: (a) wash hand basin taps and kitchen taps have a maximum water flow of 6 litres/min. (b) showers have a maximum water flow of 8 litres In. (c) WCs, including suites, bowls, and flushing cisterns, have a full flush volume of a maximum of 6 litres and a maximum average flush volume of 3,5 litres. (d) urinals use a maximum of 2 litres/bowl/hour. Flushing urinals have a maximum full flush volume of 1 litre.	The requirements are not covered by these criteria. Nordic Ecolabelling does not see it as relevant to implement on all renovation projects as the scope varies greatly for each project, Please refer to the criteria for Nordic Swan Ecolabellign of New Buildings for further information on this EU Taxonomy requirement.
7.2.4.1: Transition to a circular economy At least 70% (by weight) of the non-hazardous construction and demolition waste (excluding naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Decision 2000/532/EC) generated on the construction site is prepared for reuse, recycling and other material recovery, including backfilling operations using waste to substitute other materials, in accordance with the waste hierarchy and the EU Construction and Demolition Waste Management Protocol (300). Operators limit waste generation in processes related to construction and demolition, in accordance with the EU Construction and Demolition Waste Management Protocol and taking into account best available techniques and using selective demolition to enable removal and safe handling of hazardous substances and facilitate reuse and high-quality recycling by selective removal of materials, using available sorting systems for construction and demolition waste. (300) EU Construction and Demolition Waste Protocol (version of 4.6.2021: https://ec.europa.eu/growth/content/eu-construction-anddemolition-waste-protocol-0_en).	The requirement is covered by “O11 Waste management” that requires a waste management plan in accordance with the EU Construction and Demolition Waste Management Protocol. Construction and demolition waste must be accounted for by reports from the waste management company showing the amounts of relevant waste fractions collected in relation to the total volume of the project’s construction waste. The intended treatment form of the waste fractions and the receiver of the fractions must be stated. Both construction site and module/prefabricated element factories must be accounted for. The mandatory level is in alignment with the requirement in the EU Taxonomy. Sweden: According to Byggföretagen's and Fastighetsägarna's taxonomy interpretation sorted wood waste can be calculated as part of the non-hazardous construction and demolition waste prepared for reuse, recycling, and other material recovery even if it is incinerated after collection by the waste management company. This interpretation differs from the other Nordic countries. Nordic Ecolabelling awaits clarification from the EU Commission on this issue.

	Selective demolition must specifically be accounted for in O8. In conclusion, it is assessed that the documentation required to verify O11 can be used as documentation to verify taxonomy alignment.
7.2.4.2: Transition to a circular economy Building designs and construction techniques support circularity and demonstrate, with reference to ISO 20887 (301) or other standards for assessing the disassembly or adaptability of buildings, how they are designed to be more resource efficient, adaptable, flexible and dismantlable to enable reuse and recycling. (301) ISO 20887:2020, Sustainability in buildings and civil engineering works - Design for disassembly and adaptability - Principles, requirements, and guidance (version of 4.6.2021: https://www.iso.org/standard/69370.html).	The requirement is not covered by these criteria. The uncertainties related to the interpretation of the requirement is currently considered too high for a mandatory requirement. No point requirements are available in these criteria. Please refer to the criteria for Nordic Swan Ecolabelling of New Buildings for further information on this EU Taxonomy requirement.
7.1.5.1: Pollution prevention and control Building components and materials used in the construction comply with the criteria set out in Appendix C to this Annex. Annex C: The activity does not lead to the manufacture, placing on the market or use of: (a) substances, whether on their own, in mixtures or in articles, listed in Annexes I or II to Regulation (EU) 2019/1021, except in the case of substances present as an unintentional trace contaminant. (b) mercury and mercury compounds, their mixtures and mercury-added products as defined in Article 2 of Regulation (EU) 2017/852. (c) substances, whether on their own, in mixture or in articles, listed in Annex I or II to Regulation (EC) No 1005/2009. (d) substances, whether on their own, in mixtures or in an article, listed in Annex II to Directive 2011/65/EU, except where there is full compliance with Article 4(1) of that Directive. (e) substances, whether on their own, in mixtures or in an article, listed in Annex XVII to Regulation (EC) 1907/2006, except where there is full compliance with the conditions specified in that Annex. (f1) substances, whether on their own, or in mixtures or in an article, in a concentration above 0,1 % weight by weight (w/w), and meeting the criteria laid down in Article 57 of Regulation (EC) 1907/2006 and that were identified in accordance with Article 59(1) of that Regulation for a period of at least eighteen months, except if it is assessed and documented by the operators that no other suitable alternative substances or technologies are available on the market, and that they are used under controlled conditions* (f2) In addition, the activity does not lead to the manufacture, presence in the final product or output, or placing on the market, of other substances, whether on their own, or in mixtures or in an article, in a concentration above 0,1% weight by weight (w/w), that	Evaluation of the requirements in Appendix C in Annex 1 of the EU Taxonomy for new materials: a) It is considered that the requirements in the EU Taxonomy and the national legislations are the same. Applicants must always fulfil the current regulatory requirements in relation to their activities. No further documentation is therefore needed. b) The EU Taxonomy does not refer either to the annexes or to the exemptions in the directive and are therefore stricter than the regulation. These criteria regulate the content of mercury in all chemical products O25 and in buildings products covered by O33. For these product types, the criteria are aligned with this EU Taxonomy requirement. Products or materials that are not covered by these requirements must be evaluated by the applicant for alignment with this requirement. c) The EU Taxonomy refers to Annexes I and II, but no reference is made to any exemptions, it is therefore stricter than the general regulation. However, the exemptions in question (e.g. substances used as feedstock, process agents, destruction essential laboratory and analytical uses, hydrochlorofluoro-carbons, methyl bromide and halons) does not seem relevant for the products in question. d) The EU Taxonomy refers to Annex II and Article 4(1). EEE placed on the market shall not contain the substances listed in Annex II. RoHS do however have exemptions in Annex III and IV (probably not relevant) which are not mentioned in the taxonomy. The EU taxonomy is therefore stricter than the legislation. In general, electronic equipment is not regulated in these criteria. The applicant should be aware if any exemptions in annex III are relevant as they are not covered by these criteria. e) The EU Taxonomy refers to Annex XVII in REACH. The EU Taxonomy and the national legislations have the same criteria. Applicants must always fulfil the current regulatory requirements in relation to their activities. No further documentation is therefore needed. f1) The EU Taxonomy refers to Article 57 and identified in accordance with 59(1), the Candidate List in REACH. This is a list for eventual inclusion in Annex XIV. The EU Taxonomy prohibit the manufacture, placing on the market or use of these substances and is therefore stricter than the national legislation. These criteria

meet the criteria of Regulation (EC) No 1272/2008 in one of the hazard classes or hazard categories mentioned in Article 57 of Regulation (EC) 1907/2006, except if it is assessed and documented by the operators that no other suitable alternative substances or technologies are available on the market, and that they are used under controlled conditions. * The Commission will review the exceptions from the prohibition from manufacturing, placing on the market or use of the substances referred to in point (f) once it will have published horizontal principles on essential use of chemicals	restrict the use of substances on the Candidate List for chemical products (O25) and specific listed construction products/materials specific (O33). Products or materials that are not covered by these requirements must be evaluated by the applicant for alignment with this requirement. f2) The EU Taxonomy refers other substances, whether on their own, or in mixtures or in an article, in a concentration above 0,1% weight by weight (w/w), that meet the criteria of Regulation (EC) No 1272/2008 in one of the hazard classes or hazard categories mentioned in Article 57 of Regulation (EC) 1907/2006. This means substances not yet on the Candidate List. This criteria for renovation of buildings restrict the use of the relevant hazard classes and categories (CMRs, PBT, vPvB and endocrine disruptors) for all chemical products (O21-O26) and construction products/materials covered by O33. Overall conclusion: Products that are covered by O21-O26 or O33 are aligned with the requirements in Appendix C in the EU Taxonomy. Products that are not covered by O21-O26 or O33 must be evaluated by the applicant for EU Taxonomy alignment. In addition, please note the following: • Electronic equipment is not regulated in these criteria. – • The applicant should be aware if any exemptions in annex III are relevant as they are not covered by these criteria.
7.1.5.2: Pollution prevention and control Building components and materials used in the building renovation that may come into contact with occupiers (302) emit less than 0,06 mg of formaldehyde per m3 of test chamber air upon testing in accordance with the conditions specified in Annex XVII to Regulation (EC) No 1907/2006 and less than 0,001 mg of other categories 1A and 1B carcinogenic volatile organic compounds per m3 of test chamber air, upon testing in accordance with CEN/EN 16516 or ISO 16000-3:2011 (303) or other equivalent standardised test conditions and determination methods (304). (302) Applying to paints and varnishes, ceiling tiles, floor coverings, including associated adhesives and sealants, internal insulation, and interior surface treatments, such as those to treat damp and mould. (303) ISO 16000-3:2011, Indoor air — Part 3: Determination of formaldehyde and other carbonyl compounds in indoor air and test chamber air — Active sampling method (version of 4.6.2021: https://www.iso.org/standard/51812.html). (304) The emissions thresholds for carcinogenic volatile organic compounds relate to a 28-day test period.	These requirements are not covered by the Nordic Swan Ecolabelling criteria for Renovation of buildings. We do not require emission testing for individual building products but set chemical requirements on ingoing chemical substances. The uncertainties related to the interpretation of which materials are specifically covered by the requirement is currently considered too high for a mandatory requirement. No point requirements are available in these criteria. Please refer to the criteria for Nordic Swan Ecolabellign of New Buildings for further information on this EU Taxonomy requirement.
7.2.5.3: Pollution prevention and control Measures are taken to reduce noise, dust and pollutant emissions during construction or maintenance works.	Handling of noise, dust and pollutant emissions during construction or maintenance work is considered to be covered by national legislation on working environment and environment.

3 General requirements

O1 Outline description of the renovation project

The application must include a description that includes the following elements for the renovation project and for the renovated building:

a) Documentation that the renovation project complies with the building types and the size and scope of the renovation in the product group definition, see page 5.

b) A description of the existing building's carcass/load bearing structure, façade, roof, foundations, heating system, ventilation system and other essential installation systems.

c) An outline description of the extent, purpose, and objectives of the renovation. The description must show which parts of the building are to be renovated and clearly state if a storey, buildings, or parts of buildings are not included in the renovation work. The description must also include any supplementary buildings that are part of the renovation project, or which are to be newly constructed/erected.

d) Heated areas before and after the renovation must be specified.

e) Floor plans with details of the number of storeys, number of square metres of living space or premises (NO: BRA, SE: BOA,LOA, FI: A (netto), DK: Brutto and Netto, IS: A (brutto)). It must be clearly stated if, during renovation, the floor space of the building is increased (extension) or if the building category is changed (e.g., an office is converted into housing).

f) Number of residential units. For offices, health centres and clinics, hotels, conference centres and educational buildings: intended number of users of the building.

g) Commercial areas or other supplementary activities (canteen, gym etc.) in the building.

h) Outdoor areas including playgrounds and courtyards affected by the renovation project: layout and materials.

i) Option catalogue for the tenant/owner to choose from various layouts, materials, or fittings.

j) System to ensure that office buildings have individual metering of electricity for each residential/rentable unit or each floor.

✉ Documented description of the aforementioned items. Drawings, designs, illustrations, and other project documentation can constitute the basis.

✉ The extent of the renovation (excluding demolition) either reported as a proportion of the building envelope being renovated or in relation to the building's value (excluding the land value).

4 Prior to the renovation phase

Prior to the renovation phase, the project must assess the existing building. The following requirements must be documented in the early phase of the project.

O2 Hazardous material survey and report

Before the renovation work starts, a hazardous material survey must be performed by an expert*. The survey must at least cover the parts of the building that are to be renovated and include both materials to be removed and

retained. In buildings where there is suspicion of asbestos or PCB, the whole building must be surveyed.

The hazardous material survey must identify materials categorized as hazardous waste according to national legislation/guidelines and materials containing substances above the threshold limits listed in the appendix *Hazardous substances in reused construction products*.

When analysis of material samples is performed, the methods for representative sampling and testing must be defined by a third part accredited laboratory.

Materials that are suspected to contain asbestos must be marked with asbestos tape.

If a previously performed survey is more than three years old, the person/firm responsible for writing the report must assess whether there is a need to update the report.

The hazardous material survey must be documented in a report that accounts for all the findings and results from analyses. The report must at least include the following:

1. Responsible for the report*.
2. When the report is written.
3. Age of the building, year of major renovations and previous use of the building if known.
4. If only parts of the building are surveyed, it must be clearly stated and marked on drawings.
5. Results of performed material samples and analyses, for both materials for demolition and materials that are retained in the building.
6. A list of the materials that are categorized as hazardous waste according to national legislation or contain substances above the threshold limits in in the appendix *Hazardous substances in reused construction products*, that are to be removed or retained in the building. The list must include the following:
    a. The location identified by description, photographs, or drawings.
    b. Amounts.
    c. A description of measures for protecting the environment, human health and the risk of damage and theft during the remediation process.
    d. A risk assessment for materials that are to be retained in the building and description of encapsulating methods when relevant.

The follow-up of the hazardous material report must be documented according to O3.

* *The person performing the environmental survey must be qualified to conduct an environmental survey and have at least three years of relevant experience. The expert must also show relevant experience with the same type of buildings and complexity as the one in question.*

In cases where PCBs are identified in the building during the environmental survey, or in another stage, PCBs must be measured in the indoor air after remediation. For more information, see requirement O10.

✉ CV of the expert documenting relevant competence.

✉ Documented hazardous material report that covers 1. to 6. above.

O3 Follow-up of hazardous material report

The remediation contractors* must prepare a report on the management of materials identified in the hazardous material report. The report must at least contain the following:

- Information on the type and amount of hazardous waste, using the waste codes set out in Commission Decision 2000/532/EC. Deviations from the hazardous materials report must be accounted for.
- Description of an appropriate method of removal of the hazardous waste, including how it will be stored and transported.
- Information to show that the remediation contractor has followed the procedures to safeguard human health and the environment, according to the hazardous materials report.
- Details of carrier(s) and receivers of the hazardous waste.

* *Remediation contractors must be qualified to conduct remediation work within the parameters of the building type and the complexity in question.*

The total amounts of waste generated during the demolition phase and the handling must be documented in O11.

✉ Documentation of the remediation contractor's relevant competence.

✉ A report from the completed remediation process in accordance with the requirement.

✉ Receipts from hazardous waste recipients must be available upon request.

O4 Moisture survey

Before the actual work of renovating the building has begins, a survey should be carried out to assess moisture damage, mould growth, dry rot fungus, odours and water damage in the building that is to be renovated. The moisture survey must be performed by a competent moisture technician*.

The moisture survey must cover the entire building, as well as areas exempted from other requirements such as retail spaces and restaurants, and must at least include the following**:

- Foundation/base, cellar or corresponding.
- The building envelope (including roof).
- Moisture-sensitive elements indoors and outdoors.
- Technical installations.
- Interior surfaces that were exposed to moisture before the renovation (wet rooms, kitchens, showers, and washrooms).

The survey is initially, to be performed visually and non-destructively.

If the initial survey reveals a risk of moisture damage in the building, a detailed survey must be performed. The detailed survey must be carried out using destructive sampling, visual inspection with tape, analysis of material samples by microscopy, collection of air samples or another appropriate method. The choice of method must be justified in the survey.

If moisture or water damage is identified, it must be remedied/treated during the renovation process. If chemical products are used, they must comply with the requirements in chapter 8.

If any building components are identified as being at risk of moisture damage, they must be addressed during the planning stage and remedied during the renovation process.

If mould removal is necessary, the work must be carried out in compliance with national occupational health and safety guidelines and performed by a licensed/authorised contractor.

* *The competent moisture expert technician must have documented knowledge and experience in building technology, along with knowledge of moisture in materials and constructions and the consequences. Furthermore, the expert technician must have at least 2 years' experience in moisture prevention work or moisture damage assessment work and at least 2 years' experience in working on building projects, project planning and/or the management of buildings.*

** *If the whole building cannot be surveyed (e.g. technical installations in all residential units) a representative selection of areas must be surveyed, and the selection must be justified to Nordic Ecolabelling.*

✉ A report from the moisture survey stating whether harmful moisture or water damage has been found, whether structures are considered to be well designed and an assessment of the design of any wet rooms.

✉ Planned corrective actions to remediate moisture damage that has been found and building components that are at risk of moisture damage.

✉ CV of the expert documenting relevant competence.

✉ Report of any remediation conducted.

O5 Radon

The risk of high radon concentrations in the indoor air of occupiable rooms must be evaluated through measurements or a risk analysis. The annual average concentration must not exceed each country's legislation on highest permitted concentrations of radon for new buildings, as shown in Table 1. The requirement can be met by alternative a), b) or c) below. However, option b is not applicable for Finland and Sweden.

a) **Risk analysis with long term radon measurements conducted before renovation**
The risk of radon concentrations above the highest permitted concentrations in the renovated building must be evaluated before the renovation works start. Long-term measurements of the radon concentration in the indoor air must be combined with an assessment of the risk of increasing radon exposure levels due to the renovation work and preventive measures needed to minimise this risk must be described. Ground/infill sampling, building material inventory and assessment of the air tightness of relevant structures can be part of the risk analysis. Measurements must be no more than 5 years old. Based on the findings of the risk analysis, relevant measures for prevention of radon intrusion must be taken.

b) Risk analysis with no radon measurements available (Not applicable for Finland and Sweden)

A risk analysis in line with a), but not supported by long term measurements can be accepted for buildings in areas where the ground conditions indicate a low radon risk, the building material inventory does not show elevated radon risks from materials, and where the building's structures are in a condition which effectively protects the building from radon intrusion. Short term measurements can be part of the documentation but are not alone sufficient. Ground and infill sampling or radon maps issued by authorities or geotechnical institutes are accepted as proof of low radon risk areas.

c) Measurements conducted after renovation

Long term radon concentration measurements during the heating season after finished renovation must show compliance with legislative limit values for new buildings. If compliance is not reached, corrective measures must be taken.

Table 1 Limit values for radon in the indoor air

Country	Limit value of annual average radon concentration in the indoor air
Denmark	100 Bq/m^3
Finland	200 Bq/m^3
Norway	200 Bq/m^3, action limit 100 Bq/m^3 *
Sweden	200 Bq/m^3

National regulations and methodologies with specified standards in the field must be complied with.

* *Any measures taken due to the action limit must be accounted for.*

Projects in Iceland are exempt from the requirement.

☒ a) Long-term measurement(s) and calculated annual average radon concentration in the indoor air. Risk analysis according to specifications in the requirement.

☒ b) Risk analysis according to specifications in the requirement. Proof of the location's low radon risk, e.g. radon maps or ground and infill sampling. Review of the material inventory showing no elevated radon risks from the materials.

☒ c) Long-term measurement(s) and calculated annual average radon concentration in the indoor air. The measurements must be made in the heating season after finished renovation.

☒ Description of (any) radon prevention measures undertaken in the building.

O6 Mapping of components and materials suitable for reuse

Before the demolition work takes place, the building must be mapped by an expert* to identify building parts and materials that are suitable for reuse. As a minimum the building parts and materials that will be removed during the demolition must be accounted for in the report**.

The report must at least contain the following information:

1. Person responsible for writing the report.
2. When the report is written.
3. Age of the building, year of major renovations and previous use of the building if known.
4. Building parts and materials** suitable for reuse must be summarised in a table providing the following information:
    a. Description of product, e.g., dimensions, sound class, fire characteristics.
    b. Estimated remaining lifetime.
    c. Estimated amounts.
    d. Deconstruction method, reference can be made to O8.
    e. Recommended method of storage after deconstruction.
    f. Existing documentation of the building parts and materials if it exists.

g. If any products or materials are covered by a take-back system, specify the type of material, receiving facility and approximate quantities.

** The expert must be trained in documenting building parts and materials suitable for reuse and have at least 3 years' experience in the field. This can be either an internal or an external person.*

*** The mapping must at least include carcass, technical installations, stairs, floors, interior and exterior doors, windows, building panels, roof covering, façades, bricks, concrete, structural timber, stone material, fixtures, and sanitary ware.*

✉ A report of components and materials for reuse that includes all the bullet points above.

✉ CV of the expert documenting relevant competence.

O7 Plan for reuse

The potential use of materials listed as suitable for reuse in O6 must be followed-up during the early phases of the project. This must result in a plan for reuse.

All identified components and materials from O6 must be considered for reuse. The project's considerations must result in a plan for reuse, including the following:

- Materials that will be reused internally in the project.
- Materials for external reuse, e.g., in another project, sold on the market or handed over to a firm specialized in reused materials.

✉ A plan including materials identified in O6 and their intended use.

O8 Selective demolition

Selective demolition must be used to facilitate reuse and high-quality recycling by selective removal of materials. Before demolition work begins it must be accounted for (e.g., in a demolition plan) how selective demolition will be used in the renovation project.

After demolition a follow-up report must be delivered accounting for the use of selective demolition in the project.

Reference can be made to O6 if relevant.

Sweden: Windows and window doors must always be removed with the glazing and frame intact and sent for flat glass recycling. This does not apply to windows with colour, films, lamination, fire protected properties or classified as hazardous materials.

✉ Before demolition begins: Plan for selective demolition.

✉ After demolition: Report accounting for the use of selective demolition in the project.

✉ Sweden: Confirmation from the waste contractor that the windows and window doors are sent to flat glass recycling.

O9 Plan for indoor air quality

A plan for indoor air quality during the renovation must be produced by an indoor environment expert*. The plan must as a minimum, describe procedures, responsibilities, and necessary measures for:

a) Identification and risk assessment of pollution sources, including particulate matter.

b) Description of necessary measures to handle the pollution sources found in a), e.g., ventilation, filtration, ventilation system design or other relevant strategies. This includes the protection of heating, ventilation, and air conditioning systems during demolition, renovation, and remediation work.

c) Cleaning of the ventilation system before the building is taken into use.

d) A self-monitoring checklist accounting for a) to c) must be created. Follow up on the checklist must be available for Nordic Ecolabelling upon request.

An already established IAQ plan in accordance with Greenguard, LEED or BREEAM can be used as documentation.

** The indoor environment expert must have proven expertise and experience of construction technology, as well as knowledge of indoor environment-related problems and effects of pollutants in the indoor environment. The person must have at least two years' experience of indoor environment work or indoor environment assessments.*

✉ The plan for indoor air quality with procedures and measures that show how a) to c) are met.

✉ Description of the indoor environment expert's expertise and experience, e.g., a CV.

O10 Measurement of PCB levels in indoor air

PCB must be measured in the indoor air in cases where PCB concentrations in materials* exceed the national threshold limit for hazardous waste (≥ 50 mg PCB/kg)[1]. The PCB content must be below 300 ng PCB/m^3 in the indoor air.

The air in the buildings where PCBs have previously (not in conjunction with Nordic Swan Ecolabelling) been remediated must also be measured to verify that the requirement has been met.

If the level of PCBs exceed the threshold limit value stated in the requirement, further action must be taken to trace the source of the PCB and then remove/remediate it. The indoor air must then be tested once again to analyse PCB levels.

The measurement must be conducted in compliance with “Instructions for measuring PCBs in the indoor climate”. See https://pcb-guiden.dk/Media/637968423794975979/pcb_maalemetode.pdf.

If other test methods are used the methods must be verified by the Nordic Ecolabelling in advance.

***** *If PCB has only been found in outdoor materials and in a location where it cannot migrate to the indoor environment, it is not necessary to perform PCB measurements. However, Nordic Ecolabelling reserves the right to require testing in case of doubt.*

The building envelope must be intact or rebuilt tightly insulated before testing.

The requirement shall also be verified for any bomb shelter in the building.

✉ Analysis report showing measured PCB contents in the indoor air expressed as ng PCB/m^3 air.

[1] Håndtering af PCB-holdigt byggeaffald - PCB-guiden

5 Resource efficiency and circular economy

O11 Waste management

This requirement applies to waste generated during both the demolition and construction work. The requirement can be documented as a whole or separately for Part A and Part B.

Part A: Waste management plan(s)

Before the demolition and construction work begins the waste management plan(s) for the project must be sent to Nordic Ecolabelling. The plan must contain information about waste fractions, chosen waste management company and the receiver's** intended treatment*** form of the fractions. The plan must be made in accordance with the EU Construction and Demolition Waste Management Protocol.

Part B: Reporting

At least 70% by weight of the non-hazardous construction and demolition waste generated on the construction site*, must be prepared for reuse, recycling and other material recovery including backfilling operations using waste to substitute other materials, in accordance with the waste hierarchy and the EU Construction and Demolition Waste Management Protocol.

The percentage excludes naturally occurring material referred to in category 17 05 04 in the European List of Waste established by Decision 2000/532/EC.

Untreated wood, wood treated with hazardous substances (wood classified as hazardous waste) and wood treated with non-hazardous substances, must always be sorted separately.

After finished project, a report documenting the requirement threshold limit (70%) and the following information must be sent to Nordic Ecolabelling:

1. The total amount of construction and demolition waste produced at the construction site*.
2. The amounts of all waste fractions, the company name of the respective receiver(s)** and their intended treatment form.
3. Calculation of material recovery degree based on the bullets above.

Unsorted/mixed construction or demolition waste cannot be counted as recycling/material recovery unless it is documented to be separated subsequently by the waste contractor.

** If the building is mainly constructed of modules/prefabricated building module elements with finished or nearly finished interior surfaces produced in a factory, then the factory must in addition comply with the requirement level on a yearly basis or be accounted for as a part of the total waste calculation. Prefabricated concrete elements do not need to be included.** Receivers can be both treatment facilities that carry out material recovery or receivers of waste fractions that sort and distribute it to relevant treatment facilities. A company that only transports construction waste is not regarded as a receiver.*

**** Sweden: Non-hazardous wood waste that is sorted separately on the building site and in factories of modules/prefabricated elements can be calculated as prepared for reuse, recycling, or other material recovery even if the intended use is incineration. Please see section 7.2.4.1 in the chapter "Alignment with the EU Taxonomy" for details on the interpretation of EU Taxonomy.*

✉ Part A: The waste management plan(s) for the project must be delivered before the demolition or construction work starts.

✉ Part B: Report from the waste management company in accordance with the bullets 1-3 in the requirement.

O12 Hazardous substances in reused construction products and materials

When reused construction products, fittings, and materials from other projects (materials not covered by O2 and O3) are used, a risk analysis documenting the presence of hazardous substances must be conducted by an expert*. Hazardous substances must be evaluated and documented according to all relevant national legislation and in the appendix *Hazardous substances in reused construction products*. Internal reuse of products is covered by O2 and O3.

The risk analysis must, as a minimum, be based on the age of the building/construction, the renovation history of the building, the durability / lifetime of the materials, the state and cleansing of the material and knowledge and experience with the materials used at the time the building of origin was first constructed and renovated. This includes content of problematic substances in the material itself and in surrounding materials if substances found have migratory properties.

If the expert identifies any risk of undesirable substances (according to the appendix *Hazardous substances in reused construction products* and relevant national legislation), analyses must be performed by an accredited laboratory to verify the content in relation to relevant threshold limits in the appendix *Hazardous substances in reused construction products*and national legislation. Nordic Ecolabelling always have the right to require laboratory analysis for reused products.

Reused materials must be documented in the logbook (O20).

* *The expert conducting the risk analysis must be trained in documenting hazardous substances and have at least 3 years' experience in the field of environmental mapping/surveys of buildings. This can be either an internal or an external person.*

✉ Overview of the reused materials used.

✉ Risk analysis from expert that documents the presence of undesirable substances listed in the appendix *Hazardous substances in reused construction products* and relevant national legislation.

✉ Where relevant, an analysis report from an accredited laboratory on the substances listed in the appendix *Hazardous substances in reused construction products*and relevant national legislation.

✉ Documentation of the expert's competence, e.g., a CV.

O13 Waste sorting inside the building

When the renovation project involves replacement or significant changes in the facilities covered by the requirement (e.g., in the kitchen), there must be facilities for waste sorting available in the Nordic Swan Ecolabelled renovated building. The number of sorting vessels is stated for each building type below.

Residential buildings and residential care facilities

- Sorting vessels for minimum four fractions in all residential units*.
- Communal kitchens: Sorting vessels for minimum four fractions must be installed in or in the vicinity of the kitchen (e.g., in homes for the elderly and student housing).

* *Kitchenettes without cooking facilities such as oven and stove (e.g., homes for the elderly) are exempted from the requirement.*

Educational buildings

- Sorting vessels for minimum four fractions must be installed in or in the vicinity of the main kitchen and in all other permanent kitchen facilities.
- Sorting vessels for minimum two fractions must be installed in all classrooms and common rooms.

Office buildings, health centres and clinics

- Sorting vessels for a minimum of four fractions must be installed in canteen/restaurant facilities.
- Sorting vessels for a minimum of two fractions must be installed in all kitchenettes.

Hotels

- Sorting vessels for a minimum of four fractions must be installed in the hotel kitchen.
- Sorting vessels for a minimum of three fractions must be installed in the dining facilities, conference facilities and reception.

Conference centres

- Sorting vessels for minimum three fractions must be installed in the kitchenettes.
- Sorting vessels for minimum three fractions must be installed in the conference facilities and reception.

✉ Description of sorting vessels for waste sorting. Documentation can be description, pictures, or datasheet.

6 Energy

O14 The energy use of the building

The renovated building must comply with one of the following three alternatives:

Alternative 1

Denmark:

All requirements for renovation class 1 or 2 in BR18 are fulfilled.

Calculation method: BE18 or equivalent.

Finland:

Energy demand equivalent to maximum 80% of the Ministry of the Environment's regulation (4/2013) on improving the energy efficiency of buildings in conjunction with repair and modification works, for the building category in question.

Calculation method: The Ministry of the Environment's regulation on the energy performance of buildings or the equivalent.

Iceland:

All building types: 5% better than BRG.

For the building to be EU Taxonomy compliant, the energy demand must meet the requirement for DK, SE, or FI.

Calculation method: In accordance with BRG.

Norway:

Energy use equivalent to maximum permitted in accordance with the TEK 17 for new buildings.

Calculation method: NS 3031 or with a programme validated in accordance with the NS EN 15265 standard.

Sweden:

Energy use (EP_{pet}) equivalent to maximum permitted in accordance with BBR for new buildings.

Calculation method: BBR, BEN and national practice in the sector for Sweden, see the appendix *Energy calculation.*

The following applies to all countries:

New national regulations: If new national regulations and thresholds for energy consumption of buildings are introduced during the term of validity of the criteria, Nordic Ecolabelling will perform a new assessment of the energy requirement and may adjust the requirement. The adjustment may involve a national consultation round.

Any exemptions or reliefs for e.g., timber frame houses, temporary buildings, or buildings which, due to their size, are exempted from the energy requirements in the building regulations of the countries may not be used.

Alternative 2 (applies for SE, NO, FI, and DK):

Renovation of the building must lead to a reduction of primary energy demand (PED) of at least 30%. In addition, the renovated building must as a minimum have energy class E (SE, NO, FI,) or D (DK).

The improvement must result from an actual reduction of primary energy demand, meaning that the reductions in net primary energy demand through installation of renewable energy sources are not taken into account.

The initial primary energy demand and the estimated improvement are based on a detailed building survey/energy audit conducted by an accredited independent expert with minimum 5 years' experience (accreditation can also be related to the company). The results must be validated through an Energy Performance Certificate and report.

Calculation method SE, FI and DK: according to the national implementation of the EU Directive 2010/31/EU.

Calculation method NO: according to the "veiledning om beregning av primærnenergibehov og nesten nullenergibygg" with the primary energy factor of 1 for all energy carriers. The energy class must be calculated according to "energimerkeforskriften for bygninger" (FOR-2009-12-18-1665).

If the building directive is renewed during the validity of these criteria, Nordic Ecolabelling will perform a new assessment of this energy requirement and may adjust the requirement. The adjustment may involve a national consultation round.

Alternative 3: Protected buildings and buildings worthy of preservation

The following building are covered by this alternative:

- DK: Protected buildings and buildings worthy of preservation with high conservation value (class 1-4 in the SAVE method[2]).
- FI: Protected buildings and buildings worthy of preservation that are defined in the law on built heritage (498/2010) or in town plans.
- NO: Protected buildings, as defined in the act kulturminneloven or svalbardmiljøloven, and buildings worthy of protection, as defined in the act plan- og bygningsloven, or naturmangfoldloven.
- SE: Protected buildings and buildings worthy of preservation are defined by Country administrative Board (Länstyrelsen). In addition, buildings q-marked by the municipalities in the local/zone plan, or alternatively buildings that are part of a municipality cultural environment programme or conservation programme.
- IS: Protected buildings and structures that are defined as protected by the Cultural Heritage Agency of Iceland, see here: Friðuð hús og mannvirki | Minjastofnun.

The following must be documented in alternative 3:

a) It must be documented that the building is covered by alternative 3. Documentation from the relevant national authority must be sent to Nordic Ecolabelling.

b) The affected parts of the building must fulfil the relevant requirements in the national building legislation related to the energy performance of the building. Deviations from the general building legislation must be justified according to the classification as protected or worthy of preservation. This can e.g., be restrictions that limit/affect the technical solutions and possibilities in the project. Documentation used for the building permit can be used to verify this when relevant.

Please note: When using alternative 3 the renovation will not be aligned with the EU Taxonomy.

☒ Alternative 1: Energy calculation according to the requirement.

☒ Alternative 2: Energy Performance Certificate and report documenting the initial primary energy demand of the building.

☒ Alternative 2: Energy calculation verifying that the planned measures will result in a 30% reduction of the primary energy demand.

☒ Alternative 2: Energy Performance Certificate and report documenting the primary energy demand of the renovated building.

☒ Alternative 3: Documentation for bullets a) and b).

[2] https://www.bygningsbevaring.dk/uploads/files/SAVE_Analyse_og_vaerdisaetning/SVAD_ny_SAVE_Metode_2017.pdf

O15 Lighting management

Lighting systems that are changed as a part of the renovation project must fulfil the following:

A: Outdoor lighting

All types of buildings

All outdoor lighting must have automatic demand control installed, that at least turns lighting off when there's sufficient daylight. The lighting control must be connected to the fixture and not only to/in the light source. This applies to lighting in all common areas, including shared courtyards, shared roof terraces and playgrounds, façade lighting, entrance areas and parking spaces.

All luminaires must be well shielded from the sky with <0.5% light above the horizontal line of the light fixture.

Lighting on private terraces/balconies and sign lighting is exempted from the requirement on automatic demand control.

B: Indoor lighting

Residential buildings and residential care facilities

Automatic demand control must be installed in all communal areas such as entrance halls, stairwells, laundry rooms, storage rooms, hobby rooms, meeting rooms, communal kitchens, communal living rooms and communal dining areas.

Educational buildings

- Automatic demand control must be installed in all rooms.
- In rooms with access to daylight, the artificial lighting must dim in response to daylight levels.

Office buildings, health centres and clinics

- Automatic demand control must be installed in all rooms.
- In rooms with access to daylight, the artificial lighting must dim in response to daylight levels.

Hotels

- Automatic demand control must be installed in all guest rooms. Key-card control is accepted.

Conference facilites

- Automatic demand control must be installed in all meeting rooms, common areas and corridors.
- In rooms with access to daylight, the artificial lighting must dim in response to daylight levels.

General exemptions

- Dormitories in preschools.
- Technical service areas including lifts.

- Lighting for works of art.
- Workplace lighting, worktop lighting and lighting fitted into technical installations and equipment.
- Emergency lighting and lighting in bomb shelters.
- Rooms or spaces in residential care facilities, where lighting for safety reasons cannot switch off.
- For classrooms, rooms for group working and studying as well as common areas in e.g., student housing, co-living apartments and residential care facilities: The lighting should switch off automatically when the room is not in use. However, manual light switches can be used to control the lighting during use of the room.

✉ Description of the automatic demand control for indoor and outdoor lighting in accordance with the requirement.

✉ Product sheet or other product information stating that the outdoor light fixtures are well shielded from the sky with <0.5% light above the horizontal line of the light fixture.

O16 Energy efficient white goods

Household appliances and professional kitchen appliances installed as a part of the renovation project must fulfil the energy class requirements in accordance with Tables 2 and 3 below.

If new legislation comes into force during the validity period of the criteria, Nordic Ecolabelling will assess the requirement and an adjustment may be implemented.

Table 2 Requirements for household white goods

Product type	Until 2024-12-31* the following levels apply	Least level of energy label from 2025-01-01
Energy labelling according to Energy Label Regulation 2017/1369 (including supplements)		
Washing machine	C	B
Refrigerator	E	E
Freezer	E	E
Combined refrigerator and freezer	E	E
Refrigerator for mini kitchen (height ≤80 cm)	F	F
Drying cabinets	Must have an energy consumption of no more than 0.4 kWh/kg of laundry.	Must have an energy consumption of no more than 0.4 kWh/kg of laundry.
Combined wash and tumble dryer	E	D
Tumble dryers	D	C
Dishwasher	D	C
Energy label in accordance with the Energy Labelling Directive 2010/30/EC (including supplements)		
Tumble dryers	A++	A+++
Integrated oven	A	A+
Oven in free standing stove	A	A

Electric water heater installed in individual apartments or single-family houses	C	C

** 2024-12-31 is the last day to order white goods to the building project.*

Table 3 Requirements for professional kitchen appliances.

Product type	Requirement
Boiling pans	At least 90% energy efficiency according to EFCEM's Energy Efficiency Standard for boiling pans or equivalent. Boiling pans using induction technology or other technology with comparable energy efficiency is exempt from the EFCEM test.
Refrigerators	Class B or better*
Freezers	Class D or better*
Combined freezer/refrigerator cabinets	D or better*

** Energy class according to Energy Labelling Directive 2010/30/EC (1094/2015/EU)*

Refrigerators and freezers with central cooling systems are not covered by the requirement.

✉ Household appliances: Overview of all household appliances installed in the Nordic Ecolabel building, which includes name/product specification, product type and energy label. For drying cabinets, additional documentation showing the drying cabinet's energy use.

✉ Product sheet or manual showing the energy class.

✉ For professional kitchen appliances: Overview of all products stating the type of product, product sheet, technical manual or similar document showing fulfilment of the requirement.

✉ For boiling pans: a) Results from tests performed in accordance with EFCEM's Energy Efficiency Standard for boiling pans or equivalent.
or b) Datasheet or similar documenting the induction heating technology. If boiling pan is not induction technology the producer must document energy efficiency comparable to induction.

7 Climate

O17 Cement and concrete

The climate impact originating from newly installed concrete elements and ready-mix concrete used at the construction site must be accounted for according to the national requirements below.

EPDs must be produced in accordance with ISO 15804/EN 16757:2017 and ISO 14025 and must either be:

- third-party verified according to ISO 14025, or
- produced using a third-party reviewed EPD tool for cement or concrete according to ISO 14025.

The requirements for prefabricated elements can alternatively be met by using a minimum of 30% reused elements. The reused concrete must be assessed according to requirement O12.

Denmark:

Minimum 90% (weight or volume) of the ready-mix concrete used at the construction site must as a minimum have a GWP 15% lower than the GWP level in the corresponding industry EPD published by Dansk beton: https://www.epddanmark.dk/epd-databasen/dansk-beton-fabriksbetonforeningen/. Only the phases A1-A3 must be accounted for.

The specific products must be documented by a product specific EPD.

EPD-generator from Dansk Beton can be used.

Finland:

Minimum 70% (weight or volume) of the ready-mixed concrete used at the construction site must document compliance with the concrete class GWP.85* or better in BY Low Carbon Classification, Finish concrete association. (https://vahahiilinenbetoni.fi/in-english/)

Minimum 70% (weight or volume) of the concrete used in prefabricated elements** must document compliance with the concrete class GWP.85 or better in BY Low Carbon Classification, Finish concrete association. (https://vahahiilinenbetoni.fi/in-english/)

The Finnish Concrete Associations Low-carbon calculator can be used.

* *Alternatively, other concrete classes within the system may be used and weighted together if it can be shown that it will give the same result in global warming potential (GWP).*

** *Prefabricated elements include Slabs between floors and roof slabs, walls between flats, outer or inner walls, lift shafts, stairs, facade elements and balconies.*

Iceland:

Minimum 90% (weight or volume) of the ready-mix concrete used at the construction site and 90% (weight or volume) of the concrete elements must be documented by a product specific EPD.

When the following concrete construction parts: foundations, load bearing systems, floor decks, wall elements, roof elements or facade elements, are newly cast, a minimum of 50% (weight or volume) of the binder used in the concrete must contain maximum 70% by weight of cement clinker.

Cement clinker is defined as the ratio of Portland cement clinker in the cement, in accordance with the definition in EN 197-1. Cement clinker is thus also included in the cement mix in the finished concrete. For concrete, the cement clinker ratio in the cement mix used in the concrete is calculated.

Norway:

Minimum 70% (weight or volume) of the ready-mixed concrete used at the construction site must comply with Low carbon concrete A* or better in the Norwegian Concrete Association's publication no. 37 Low carbon concrete (NB37).

Minimum 70% (weight or volume) of the concrete used in prefabricated elements** must document compliance with low carbon concrete A* or better in the Norwegian Concrete Association's publication no. 37 Low carbon concrete (NB37).

EPD generator provided through membership in Betongfokus and Betong Norge - Betongelementforeningen can be used.

** Alternatively, other concrete classes within the system may be used and weighted together if it can be shown that it will give the same result in global warming potential (GWP).*

*** Prefabricated elements include Slabs between floors and roof slabs, walls between flats, outer or inner walls, lift shafts, stairs, facade elements and balconies.*

Sweden:

Minimum 70% (weight or volume) of the ready-mixed concrete used at the construction site must comply with level 2* of "Vägledning Klimatförbättrad betong", published by Svensk Betong.

Minimum 70% (weight or volume) of the concrete used in prefabricated elements** must document compliance level 2 of "Vägledning Klimatförbättrad betong", published by Svensk Betong.

** Alternatively, other concrete levels within the system may be used and weighted together if it can be shown that it will give the same result in global warming potential (GWP).*

*** Prefabricated elements include Slabs between floors and roof slabs, walls between flats, outer or inner walls, lift shafts, stairs, facade elements and balconies.*

✉ FI/NO/SE: Product specific EPD from the concrete manufacturer showing that the relevant concrete products meet the requirement of the national concrete classification system for greenhouse gas emissions for the required strength class.

✉ DK/IS: Product specific EPD from the concrete manufacturer documenting the requirement.

✉ IS: Overview of the concrete construction part types that fulfil <70 of cement clinker and a calculation showing that the construction parts constitute at least 50% of the need in the building.

✉ IS: Product data sheet, eBVD or EPD stating the cement clinker content for the cement/concrete construction parts.

✉ All countries: Total amount of delivered ready-mixed concrete and prefabricated elements and amount of delivered concrete that fulfils the required concrete class.

O18 Steel production

The requirement applies to the following newly installed construction materials/building parts:

- New facade panels in steel >20% of the total façade area (excluding window/door area).
- New load bearing constructions in steel >20% by weight of the total buildings loadbearing system.

Steel rebars are not covered by this requirement.

✉ Calculation showing that facade panels and load bearing constructions consist of <20% steel.

The relevant building parts must fulfil one of the alternatives A-C:

A) High proportion of recycled content

A minimum of 75% by weight of the steel must be recycled.

Recycled is defined as both pre- and post-consumer, according to definitions in ISO 14021.

Fulfilment is shown through either:

- A signed agreement between the steel supplier and the applicant stating that the requirement is met, the declaration from the steel supplier can be based on purchase records/average data from several steel sub suppliers/manufacturers, or
- eBVD or EPD based on product-specific data/data from the steel producer´s own production stating the content of recycled steel in the product.

✉ Signed agreement as described above.

✉ eBVD or EPD as described above.

B) Reused steel parts

At least 50% of the façade panels or load-bearing steel construction must be reused building parts. Traceability back to the parts' most recent use in construction must be documented.

The reused steel parts must comply with requirement O12.

✉ Reused steel products must be accounted for and the traceability back to the parts' most recent use in construction must be documented.

C) Virgin steel production

The requirement can be verified using either: Direct traceability through the supply chain or mass balance approach[3].

The requirement can be met by fulfilling one the three alternatives (1-3) below:

1. Steel produced from traditional methods

The steel origins from a steel producer who has:

- implemented at least two of the energy efficiency measures stated as BAT in the BREF document for iron and steel production (2013 or later version). The energy efficiency measures are listed in the appendix *BAT-EAL for energy-efficiency (steel)*, and
- an active sustainability strategy focusing on reducing energy consumption and greenhouse gas emissions. The strategy for reducing energy consumption and greenhouse gas emissions shall be quantitative and time-based and must be determined by the company management.

✉ Enclose latest sustainability strategy report or equivalent documentation from the steel producer showing fulfilment of the requirement. The steel producer can also present specific targets from annual business report with reference to

[3] In case of several potential steel producers, the supplier of the metal components can verify the requirement by using a mass balance approach if there is an account documenting the annual volumes purchased from the individuals steel producers. The volumes must correspond to volumes sold to the applicant (e.g., cannot sell a larger volume than the corresponding quantity purchased from the individual steel producers).

specific numbers and assumptions. Average numbers from steel producers with several steel melting plants is accepted.

✉ Description of which energy efficiency measures stated as BAT have been implemented at the production site.

✉ Information on type of traceability used to document the requirement.

2. Responsible steel certified production site

A minimum of 50% by weight of the steel covered by the requirement comes from a production site that is certified according to the standard Responsible Steel[4], version 1.0, 2019 or later versions.

✉ Enclose valid Responsible Steel certificate from the steel producer.

✉ Information from the supplier/manufacturer of the constituent steel part about which metal parts are from certified metal production (purchase records).

✉ Information from the supplier/manufacturer of the constituent steel parts on the type of traceability used to document the requirement.

✉ Documentation from the applicant that the requirement for share of purchased steel from certified steel producers is fulfilled – e.g., invoices or other documentation from suppliers.

3. Steel production based on new technologies with reduced greenhouse gas emissions

The steel origins from steel production sites that have implemented one of the following technologies:

- direct electrolysis of iron ore.
- blast furnace top gas recycling with carbon capture and storage.
- direct smelting reduction processes.
- hydrogen steelmaking in shaft furnaces using green H_2.

✉ State the name of the steel producer and production site where the steel comes from, as well as a brief description of which technology is used.

✉ Information on type of traceability used to document the requirement.

O19 Aluminium production

The requirement applies to the following newly installed construction materials/building parts:

- New facade panels in aluminium >20% of the total facade area (excluding window/door area)
- New profiles for windows and doors in aluminium (external cladding of outer wood components for the sole purpose of weather proofing is exempted). A Nordic Swan Ecolabel window, patio door or exterior door will fulfil the requirement and must only verify the requirement with the product name and licence number. The requirement applies to doors and windows subject to EN 14351-1:2006.

[4] Overview of certified steel producers, https://www.responsiblesteel.org/certification/issued-certificates/

- New aluminium profiles in glass facade systems when the system covers more than 20% of the total facade area (excluding window/door area). The requirement applies to glass facade systems subject to EN 13830.

Mouldings around doors and windows are exempt from the requirement.

Skylights and roof domes regulated by product standard EN 1873 and windows and exterior doors that are resistant to fire pursuant to standard EN 16034 are not included in the requirement.

The requirement can be met by documenting alternative A or B:

A) High proportion recycled aluminium

A minimum of 75% by weight of aluminium must be recycled*.

However, profiles for windows and doors must minimum contain 40% recycled aluminium.

* *Recycled is defined as both pre- and post-consumed, cf. definition in ISO 14021.*

The requirement can be verified either by:

- A signed agreement between the producer/supplier of aluminium and the applicant stating that the requirement is met. The declaration from the supplier of aluminium can be based on purchase records/average data from several aluminium suppliers, or
- eBVD or EPD based on product-specific data or data from the aluminium producer´s own production that specifically states the content of recycled aluminium in the product, or
- Valid Hydro Circal certificate.

☒ Signed agreement as described above, or

☒ eBVD or EPD as described above, or

☒ Valid Hydro Circal certificate.

B) Primary aluminium production

The requirement can be met by one of the four alternatives (1-4) below.

The requirement can be verified using either direct traceability through the supply chain or mass balance approach[5].

1. Aluminium production – active sustainability strategy

Aluminium origins from a primary aluminium producer with an active sustainability strategy focusing on reducing energy consumption and greenhouse gas emissions. The strategy for reducing energy consumption and greenhouse gas emissions shall be quantitative and time-based and must be determined by the company management.

☒ Enclose latest sustainability strategy report or equivalent documentation from the producer of primary aluminium showing fulfilment of the requirement. The producer of primary aluminium can also present specific targets from annual business report with reference to specific numbers and assumptions. Average

[5] In case of several potential aluminium producers, the supplier of the metal components can verify the requirement by using a mass balance approach if there is an account documenting the annual volumes purchased from the individual aluminium producers. The volumes must correspond to volumes sold to the applicant (e.g., cannot sell a larger volume than the corresponding quantity purchased from the individual aluminium producers)

numbers from the producer of primary aluminium with several steel melting plants is accepted.

☒ Information on type of traceability used to document the requirement.

2. Aluminium production – low direct climate effecting emissions

Aluminium origins from a primary aluminium producer whose direct climate-affecting emissions from primary aluminium production does not exceed 1,5 tonnes of CO_{2e}/ton of aluminium produced.

☒ Declaration that the requirement is met, as well as calculation and indication of direct emissions in tons of CO2e/ton of aluminium produced.

☒ Information on type of traceability used to document the requirement.

3. Aluminium production – low electricity consumption for electrolysis

Aluminium origins from a primary aluminium producer whose electricity consumption for electrolysis does not exceed 15.3 MWh/ton produced aluminium.

☒ Declaration that the requirement is met, as well as calculation and indication of electricity consumption in MWh/ton produced aluminium.

☒ Information on type of traceability used to document the requirement.

4. Aluminium production – ASI certified site

A minimum of 50% by weight of aluminium origins from an ASI Performance standard[6] certified production site.

☒ Enclose valid ASI Performance certificate from the primary aluminium producer.

☒ Information from the supplier/manufacturer of the constituent aluminium part about which aluminium parts are from certified aluminium production (purchase records).

☒ Information from the supplier/manufacturer of the constituent aluminium parts on type of traceability used to document the requirement.

☒ Documentation from the applicant that the requirement for share of purchased aluminium from certified aluminium producers is fulfilled – e.g., invoices or other documentation from suppliers.

8 Chemical products, construction products, construction goods and materials

This section defines the requirements for new materials. Other products and materials are handled by the hazardous material survey and report (O2) or the requirements for reused products (O12).

[6] https://aluminium-stewardship.org/asi-standards/asi-performance-standard (visited November 2022)

This chapter consists of three sections of requirements:

1. Logbook.

2. Chemical products.

3. Construction products, goods, and materials.

Reference is made to the individual requirements, the section "Definitions" and the section “What is subject to the requirements?” For an explanation of what is included in the requirements.

Nordic Swan Ecolabel products automatically fulfil the requirements in this chapter.

8.1 Product information and logbook

O20 Logbook

The Nordic Swan Ecolabel renovation project must have a digital logbook (e.g., PDF, Word, or Excel) that includes all the construction products, goods, materials, and chemical products used in the construction of the project. Retained products in the building and reused products from elsewhere must also be registered in the logbook.

The logbook may be created using a verified third-party logbook service after approval by Nordic Ecolabelling.

The logbook must as a minimum provide the following information:

- Product name
- Product type
- Name of producer
- The location of the product in the building(s)*

Before the construction begins the logbook must be initiated and account for materials and products used in the initial stages** of the building project. The logbook must always be updated with materials and products according to the current state of the construction. The final version of the logbook must be handed in when the building is handed over. There must be routines in place to ensure that the digital logbook is accessible to the owner of the building and to Nordic Ecolabelling.

Technical instruments and electrical installations should not be described in detail but must be represented on a system level. Products subject to general exemptions, as described in the section "What is subject to the requirements", are not necessary to include in the logbook.

The GTIN number or the ID number in a national product registry should be included in the information if available.

* *Minimum level of description: ceiling, walls and floor, building’s roof, facade, cellar, stairwell, slab, building’s frame, terrace, bathroom, kitchen, balconies, garage, sports halls, garden, entrance hall, technical installation rooms, waste sorting room, laundry room, lift shaft.*

** *The initial stages are normally considered to be ‘construction of the foundation’ and ‘sealing of the building envelope’. Depending on the size of the project, the construction techniques and whether parts of the building is constructed in a module factory the specific phases included must be approved by Nordic Ecolabelling. As a minimum the materials for the construction of the foundation must always be accounted for.*

☒ The digital logbook before the construction begins covering the initial stages of the project.

☒ Procedure for updating the logbook during the construction period (reference can be made to O40).

☒ The final digital logbook when the building is handed over.

☒ Description of how the logbook is made available to the building owner.

8.2 Chemical products

A chemical product is a substance or a mixture of two or more substances, in liquid, gaseous or solid form, which are used on a construction site or by a manufacturer of prefabricated building components.

Chemical products for both indoor and outdoor use are covered by the requirements. The requirements in the criteria document and accompanying appendices apply to all ingoing substances in the chemical product. Impurities are not regarded as ingoing substances and are exempt from the requirements. Ingoing substances and impurities are defined in the Definitions section.

For details on what is subject to the requirements, reference is made to the section “What is subject to the requirements?”

O21 Classification of chemical products

Chemical products must not be classified according to Table 4.

Table 4 Requirements for the classification of chemical products

Classification of chemical products CLP Regulation 1272/2008:		
Classification	**Hazard class and category**	**Hazard code**
Hazardous to the aquatic environment	Aquatic Acute 1 Aquatic Chronic 1 Aquatic Chronic 2	H400 H410 H411
Hazardous to the ozone layer	Ozone	H420
Acute toxicity	Acute Tox. 1 or 2 Acute Tox. 1 or 2 Acute Tox. 1 or 2 Acute Tox. 3 Acute Tox. 3 Acute Tox. 3	H300 H310 H330 H301 H311 H331
Specific target organ toxicity: single or repeated exposure	STOT SE 1 STOT RE 1	H370 H372
Carcinogenicity	Carc. 1A or 1B Carc. 2	H350 H351
Germ cell mutagenicity	Muta. 1A or 1B Muta. 2	H340 H341
Reproductive toxicity	Repr. 1A or 1B Repr. 2 Lact.	H360 H361 H362

The classifications in the table concern all classification variants. For example, H350 also covers classification H350i.

Exemptions:

- Chemical anchors classified H400, H410, and H411 due to dibenzoyl peroxide (CAS no. 94-36-0) are allowed.
- Hardener for acrylic floor coatings classified H400, H410, and H411 due to dibenzoyl peroxide (CAS no. 94-36-0) are allowed for use in professional kitchens. In Nordic countries with an authorisation system, the flooring contractor must be authorised.
- Biocide-containing wood primers classified H411 used for treatment of cut surfaces and end timbers are allowed.
- Naphtha-based primers and adhesives classified H411 for outdoor use.
- Naphtha-based adhesives classified H411 for cellular rubber insulation intended for cooling pipes and ventilation ducts indoors.
- Classifications H351 and H361 for intumescent steel paints in multi storey buildings due to melamine (CAS 108-78-1).
- Finland: Classifications H351 and H362 for spray polyurethane foams used in element factories and at construction sites for sealing of windows when temperature is below 5 ˚C. Exemption applies also for fire resistant polyurethane foam used in element factories and at construction site for sealing of façade insulations, elements, transits, and insulations in base floor with a crawl space.
- Finland: Two-component injection resin based on epoxy, classified H411, for repair of individual cracks in indoor concrete decks.
- Chemical products classified H400, H410 and H411 used for the treatment of mould and similar identified in O4 Moisture survey.

Declaration Chemical products from the manufacturer of the chemical product. The declaration is done by the manufacturer through the web portal SCDP.

Safety data sheet in accordance with Annex II to REACH (Council Regulation (EC) no. 1907/2006) for all chemical products. The SDS is uploaded by the manufacturer through the web portal SCDP.

O22 CMR substances

Chemical products, used in the Nordic Swan Ecolabel renovation, must not contain any ingoing substances classified as carcinogenic, mutagenic or reprotoxic according to CLP Regulation 1272/2008, see Table 5 below.

Table 5 Non-approved classifications of ingoing substances in chemical products according to CLP Regulation 1272/2008.

Classification of ingoing substances CLP Regulation 1272/2008:		
Classification	**Hazard class and category**	**Hazard code**
Carcinogenicity	Carc. 1A or 1B Carc. 2	H350 H351
Germ cell mutagenicity	Muta. 1A or 1B Muta. 2	H340 H341
Reproductive toxicity	Repr. 1A or 1B Repr. 2 Lact.	H360 H361 H362

The classifications in the table concern all classification variants. For example, H350 also covers classification H350i.

Exemptions:

- Respirable crystalline silica/quartz classified as H372/H350i with a maximum content of 1% in raw materials.

- Glyoxal (CAS no 107-22-2) classified H341 ≤100 ppm (0.01% by weight) in the final product if the pH value in the final product is higher than pH 8.
- TiO_2 (CAS no 13463-67-7) classified H351 inhalation.
- Trimethylolpropane (CAS no 77-99-6) self-classified H361 up to ≤5000 ppm (0.5% by weight) in the final product.
- Dibutyltin (DBT) compounds and dioctyltin (DOT) compounds in sealing products ≤5000 ppm (0.5% by weight) in the final product.
- Biocide-containing wood primers containing substances classified H361d used for treatment of cut surfaces and end timbers are allowed.
- Sebacate compounds ≤5000 ppm (0.5% by weight) used as stabilizers and UV-protection in SMP-based sealants, joints, and adhesives. Time-limited exemption that applies until 2025-12-30.
- Classifications H351 and H361 for intumescent steel paints in multi storey buildings due to melamine (CAS 108-78-1).
- Finland: 4,4´-methylenediphenyl diisocyanate, isomers and homologues (CAS no. 9016-87-9) classified as Carc. 2; H351 in spray polyurethane foams used in element factories and at construction site for sealing of windows when temperature is below 5 ˚C. Exemption applies also for fire resistant polyurethane foam used in element factories and at construction site for sealing of facade insulations, elements, transits and insulations in base floor with a crawl space.
- Finland: Two-component injection resin based on epoxy, for repair of individual cracks in indoor concrete decks.

Declaration Chemical products from the manufacturer of the chemical product. The declaration is done by the manufacturer through the web portal SCDP.

Safety data sheet in accordance with Annex II to REACH (Council Regulation (EC) no. 1907/2006) for all chemical products. The SDS is uploaded by the manufacturer through the web portal SCDP.

O23 Preservatives in indoor paint and indoor varnish

Only preservatives compliant with PT 6 (in-can) and PT 7 (dry-film) according to Regulation (EU)528/2012 (The Biocidal Products Regulation) can be used.

The amount of preservative/combination of preservatives is in indoor paint and indoor varnish is limited according to Table 6 and Table 7.

If the specific concentrations limit (SCL) is changed in accordance with CLP Regulation 1272/2008 Annex VI, the limits below will also change accordingly.

For tinting systems, a worst-case calculation must be performed for the colour with most tinting paste and the base paint with highest content of preservative and isothiazolinone compounds.

Table 6 Concentration limits for preservatives totally

Product type	Preservatives total
Paints, varnishes, base paints with tinting paints etc. for indoor use.	900 ppm (0.09% w/w)
Wet room paint specifically	1600 ppm (0.16% w/w)

Table 7 Concentration limits for specific compounds

Preservatives	Concentration limit
Isothiazolinone compounds in total*	600 ppm (0.06% w/w)
BIT (CAS no. 2634-33-5)	500 ppm (0.05% w/w)
CIT/MIT (CAS no. 55965-84-9)	15 ppm (0.0015% w/w)
MIT (CAS no. 2682-20-4)	15 ppm (0.0015% w/w)
OIT (CAS no. 26530-20-1)	15 ppm (0.0015% w/w)

* *Note that dithio-2,2'-bis-benzmethylamide (DTBMA) is to be included in the total amount of isothiazolinones.*

⇪ Declaration Chemical products from the manufacturer of the chemical product. The declaration is done by the manufacturer through the web portal SCDP.

O24 Preservatives in other chemical products intended for indoor use

Only preservatives compliant with PT 6 (in-can) and PT 7 (dry-film) according to Regulation (EU)528/2012 (The Biocidal Products Regulation) can be used.

The amount of preservative/combination of preservatives in other chemical products for indoor use is limited according to Table 8.

If the specific concentrations limit (SCL) is changed in accordance with CLP Regulation 1272/2008 Annex VI the limits below will also change accordingly.

Table 8 Concentration limits for preservatives in other chemical products for indoor use.

Preservatives	Concentration limit
Isothiazolinone compounds in total*	600 ppm (0.06%w/w)
BIT (CAS no. 2634-33-5)	500 ppm (0.05% w/w)
CIT/MIT (CAS no. 55965-84-9)	15 ppm (0.0015% w/w)
MIT (CAS no. 2682-20-4)	15 ppm (0.0015% w/w)
OIT (CAS no. 26530-20-1)	15 ppm (0.0015% w/w)
IPBC (CAS no. 55406-53-6)	2000 ppm (0.2% w/w)
Bronopol (CAS no. 52-51-7)	500 ppm (0.05% w/w)

* *Note that dithio-2,2'-bis-benzmethylamide (DTBMA) is to be included in the total amount of isothiazolinones.*

Declaration Chemical products from the manufacturer of the chemical product. The declaration is done by the manufacturer through the web portal SCDP.

O25 Prohibited substances

The following substances must not be an ingoing substance in chemical products used in the production of Nordic Swan Ecolabel buildings:

- Substances categorised as Substances of Very High Concern (SVHC) and included on the EU Candidate List.

- Substances evaluated by the EU to be persistent, bioaccumulative, and toxic (PBT) or very persistent and very bioaccumulative (vPvB), in accordance with the criteria in Annex XIII of REACH.
- Endocrine disruptors: Substances on the EU member state initiative "Endocrine Disruptor Lists", List I, II and III, see the following links.
- https://edlists.org/the-ed-lists/list-i-substances-identified-as-endocrine-disruptors-by-the-eu
- https://edlists.org/the-ed-lists/list-ii-substances-under-eu-investigation-endocrine-disruption
- https://edlists.org/the-ed-lists/list-iii-substances-identified-as-endocrine-disruptors-by-participating-national-authorities

A substance that is transferred to one of the corresponding sublists called “Substances no longer on list”, and no longer appears on any of Lists I–III, is no longer excluded. The exception is those substances on sublist II which were evaluated under a regulation or directive that does not have provisions for identifying EDs (e.g., the Cosmetics Regulation, etc.). For those substances, ED properties may still have been confirmed or suspected. Nordic Ecolabelling will evaluate the circumstances case-by-case, based on the background information indicated in sublist II.

In addition, the following individual substances and substance groups are prohibited or restricted. There may be an overlap between the substances listed below and substances categorised above.

- Short-chain chlorinated paraffins (C10-C13) and medium-chain chlorinated paraffins (C14-C17).
- Perfluoroalkyl and polyfluoroalkyl substances (PFASs)
- Alkylphenols, alkylphenol ethoxylates (APEO) and other alkylphenol derivates (APD).
- Brominated flame retardants.
- Phthalates (Esters of phthalic acid (orthophthalic acid / phthalic acid /1,2-benzene dicarboxylic acid).
- Bisphenol A (CAS no. 80-05-7), bisphenol S (CAS no. 80-09-1) and bisphenol F (CAS no. 620-92-8).
- The heavy metals lead, cadmium, arsenic, chromium (VI), mercury and their compounds.
- Volatile aromatic hydrocarbons (VAH) >1% by weight.
- Organotin compounds.

Exemptions:

- Primers and adhesives for outdoor use may contain up to 20% by weight of VAH.
- Primers for waterproofing assembly (flat roofs, green roofs, courtyards, terraces, garage, basement walls and similar applications) may contain more than 20% by weight of volatile aromatic compounds due to xylene when it is demanded. Exemptions are accepted* for the following conditions if they are documented:
    - The product is used between October and April.
    - The product is used on basement walls.
    - When sufficient adhesion cannot be reached due to dense structure of the concrete or a humid or wet environment in other times of

the year. Must be documented with a tensile test.
The licence applicant applies in writing for a project-specific exemption to Nordic Ecolabelling. Decisions on approval from Nordic Ecolabelling must be awaited before using the products.

* The licence applicant applies in writing for a project-specific exemption to Nordic Ecolabelling. Decisions on approval from Nordic Ecolabelling must be awaited before using the products. The products used must fulfil O21, O22 and O25 except the general VAH restriction.

- 2,2-dibromo-2-cyanoacetamide (DBNPA, CAS. No 10222-01-2).
- Butylated hydroxytoluene (BHT, CAS. no 128-37-0) up to 100 ppm BHT in the final product.
- Melamine (CAS 108-78-1) in intumescent steel paints in multi storey buildings.

- Dibutyltin (DBT) compounds and dioctyltin (DOT) compounds in sealing products ≤ 5000 ppm (0.5% by weight) in the final product.
- Finland: Bisphenols in two-component injection resin based on epoxy, for repair of individual cracks in indoor concrete decks.
- Finland: Spray polyurethane foams with ingoing reaction products of phosphoryl trichloride and 2-methyloxirane (CAS no. 1244733-77-4) used in element factories and at construction sites for sealing of windows and balcony doors when temperature is below 5 °C. Exemption applies also for fire resistant polyurethane foam used in element factories and at construction site for sealing of façade insulations, elements, transits, and insulations in base floor with a crawl space.

Declaration Chemical products from the manufacturer of the chemical product. The declaration is done by the manufacturer through the web portal SCDP.

Safety data sheet in accordance with Annex II to REACH (Council Regulation (EC) no. 1907/2006) for all chemical products. The SDS is uploaded by the manufacturer through the web portal SCDP.

O26 Nanoparticles in chemical products

Nanomaterials/-particles (see Definitions) must not be added or be present in chemical products. Nanomaterials/-particles are defined according to the EU Commission Recommendation on the Definition of Nanomaterial (2022/C 229/01) (see Definitions).

The following are exempted from the requirement:

- Pigments*
- Naturally occurring inorganic fillers**
- Synthetic amorphous silica***
- Ground Calcium Carbonate (GCC) and precipitated Calcium Carbonate (PCC)
- Polymer dispersions

* *This exemption does not apply to pigments added for other purposes than imparting colour. Nano-titanium dioxide is not considered to be a pigment and is therefore not exempted from the requirement.*

** *This exemption applies to fillers covered by Annex V, item 7 of REACH.*

*** *This applies to unmodified synthetic amorphous silica. Chemically modified colloidal silica can be included in the products if the silica particles form aggregates in the final product. Any surface treatment of nanoparticles must fulfil requirement O21 (Classification of chemical products) and requirement O25 (Prohibited substances).*

✉ Declaration Chemical products from the manufacturer of the chemical product. The declaration is done by the manufacturer through the web portal SCDP.

8.3 Construction products – restricted material

O27 Epoxy relining

Bisfenol-based epoxy must not be used for casting new plastic piping inside existing pipes, so called relining. This ban applies to relining of water pipes and wastewater pipes.

✉ Technical description of a relining method that verifies that the method is epoxy-free.

O28 Halogen free cables

All heavy current cables must be documented as halogen-free according to EN 60754-1 (halogen acid content < 5mg/g) and EN 60754-2 (pH> 4,3 and conductivity <10 µS/mm) or in accordance with EN 63355 or EN 50267-2-3.

For cables in the classes Bca, Cca and Dca: The cable can be documented as halogen-free by a DoP (declaration of performance) that clearly indicates compliance with the additional parameter a1 or a2.

The requirement does not include data, telephone, and TV cables. Cables that arrive at the construction site together with electric appliances, such as lifts, white goods, pumps, and fans are not subject to this requirement.

Mandatory requirement O33 must also be met.

✉ Documentation from the manufacturer such as technical datasheet or DoP stating compliance with relevant standard. This is uploaded by the manufacturer through the web portal SCDP.

O29 Surface layers on floors, ceilings, walls, doors, and windows.

Doors, windows and interior surface layers on floors, ceilings and walls may not contain chlorinated plastics (e.g., PVC). This includes watertight layers, wall film, acoustic dampening foams and other products used directly underneath the surface layer. Mouldings, skirtings, and surface wall films are included.

The following are exempted from the requirement:

- Mouldings, skirting boards and baseboards in bathrooms, professional kitchens, and stairwells.
- Floorings in professional kitchens with floor drain.
- Floorings in wet rooms with floor drain in educational buildings, and residential care facilities (or similar buildings classified as residential buildings according to national legislation).
- Smaller plastic details ≤ 100 grams and outdoor glazing beads on windows and doors. Foil covering the whole product surface, is not seen as a small part.

Products covered by the exemption must fulfil O33.
Small plastic details like sealing collars or water bars are not subject to this requirement.

✉ Documentation to show how the requirement is fulfilled, for example floor plans, product data sheets, construction product declarations or similar.

✉ For exemptions mentioned in the requirement: Declaration "Surface layers of chlorinated plastics" and Declaration "Prohibited substances" from the manufacturer of the product. For windows and doors, the declaration is done by the manufacturer through the web portal SCDP. For flooring and mouldings, the declaration is instead filled out by the manufacturer and supplemented to the documentation in the web portal NEP by the licence applicant.

O30 Durable wood

The requirements for durable wood for outdoor use is described in the sections below according to the type of wood treatment.

The use of preservative-treated*, chemically modified or thermally modified wood must be documented in drawings showing that the relevant use classes are fulfilled according to EN 335.

* E.g. pressure impregnated, vacuum impregnated. Surface treatment is not covered by the requirement.

Untreated wood with natural durability is not subject to any requirements.

Preservative-treated wood

The use of preservative-treated wood containing heavy metals and/or biocides is not permitted in the use classes below (use classes according to EN 335):

- Use class 1
- Use class 2
- Use class 3 (vertical structures in use class 3.2 such as cladding, fences, partition walls and acoustic barriers)

Exemptions:

- Windows and doors in Use class 3.1
- Horizontal structures in Use class 3.2
- Load bearing structures with specific demands on strength: Weather exposed structural timber or glulam which is strength classed in accordance with EN 338 or EN 14080
- Time limited exemption until 31-12-2025: Preservative treated wood, that would not be classified as hazardous waste and only contain organic PT8 biocides up to maximum 300 ppm and no heavy metals, is allowed on facades (including supplementary buildings). A chemical analysis performed by an accredited laboratory is required to document that the amount of organic PT8 biocides in the wood is below 300 ppm. The preservative treated wood must fulfil requirements for quality testing in accordance with UC 3.2.

Preservative treated wood is not allowed for use in cultivation boxes.

For preservative-treated wood in allowed applications the wood must meet the requirement O29 on prohibited substances in construction products, construction goods and materials and meet the requirement of durability in Table 9 below.

Table 9 For preservative-treated wood the following documentation of durability applies.

Wood protection method	Use class as per EN 335	Required documentation of durability
Preservative-treated Wood in accordance with NTR	UC 3.1 (only allowed for windows and doors)	NTR B
	UC 3.2	NTR AB NTR GRAN
	UC 4	NTR A
Preservative-treated wood not classified in accordance with NTR	UC 3.2	Testing by accredited laboratory: - EN 113-2 excluding testing with Coriolus versicolor after separate accelerated ageing in line with EN 73 and EN 84. - CEN/TS 12037
	UC 4	Testing by accredited laboratory: - EN 113-2 including testing with Coriolus versicolor after separate accelerated ageing in line with EN 73 and EN 84. - ENV 807 - EN 252 for at least five years in three locations, two of which are in a Nordic country.

Chemically modified or thermally modified wood for outdoor use

The use of chemically modified or thermally modified wood must meet the requirement of durability specified in Table 10, use classes in accordance with EN 335. Requirement O29 must be fulfilled by chemically modified wood.

Nordic Swan Ecolabelled chemically and thermally modified wood fulfils O33 and meets the durability requirements in Table 10.

Table 10 For chemically modified or thermally modified wood, the following documentation of durability applies.

Wood protection method	Use class as per EN 335	Required documentation of durability
Thermally and chemically modified wood classified in accordance with NTR	UC 3.1 (only allowed for windows and doors)	NTR Bmod
	UC 3.2	NTR ABmod
	UC 4	NTR Amod
Thermally and chemically modified wood not classified in accordance with NTR	UC 3.2	Testing by accredited laboratory: - EN 113-2 excluding testing with Coriolus versicolor after separate accelerated ageing in line with EN 73 and EN 84. - CEN/TS 12037
	UC 4	Testing by accredited laboratory: - EN 113-2 including testing with Coriolus versicolor after separate accelerated ageing in line with EN 73 and EN 84. - ENV 807 - EN 252 for at least five years in three locations, two of which are in a Nordic country.

✉ Description and drawings of the relevant constructions where preservative-treated, chemically modified or thermally modified wood is used, incl. use class according to EN 335.

⇪ Documentation / certificate in accordance with table 9 or table 10. . This is uploaded by the manufacturer through the web portal SCDP. Alternatively product name and licence number for a Nordic Ecolabelled product.

⇪ Declaration Prohibited substances from the manufacturer of the preservative treated or chemically modified wood. The declaration is done by the manufacturer through the web portal SCDP.
Alternatively, product name and licence number for a Nordic Ecolabelled product.

O31 Copper

Newly installed copper is restricted in Nordic Swan Ecolabelled renovations in the following way:

A. Tap water pipes must not contain >1% weight of copper.

B. Roof and facade cladding materials and products for roofs and facades (roof drainage products, gutters, exhaust hoods, eaves nets, cover profiles and the like) must not contain more than 10% by weight of copper.

Exemptions:

- Visible pipelines in bathrooms.
- Water fittings connecting pipes, such as couplings or manifolds.
- Installation cabinets, such as manifold or water meter cabinets.
- Pipelines that due to national fire protection legislation must be made of copper and where alternatives are not available.
- Pipes through the wall for an outdoor tap

Closed pipe systems such as heating or cooling circuits are not covered by the requirement.

✉ Declaration "Copper" from applicant.

✉ If relevant, description of the use of copper in the project. Where relevant, supplementary documentation for roof and facade cladding, such as product data sheet, construction product declaration or information from producer.

O32 Plastic and rubber surfaces on playgrounds and outdoor areas

The use of impact attenuating ground cover materials with synthetic components is restricted on outdoor areas being affected by the Nordic Swan Ecolabelled renovation project. It can only be used on areas that fulfil both of the following two conditions:

- The area is subject to accessibility requirements*, and
- The area is a fall zone according to EN 1176 and EN 1177 or is a small enclosed** multisport pitch being part of a school yard.

In addition, the conditions in a) to c) must be fulfilled when ground cover materials with synthetic/plastic components are used:

a) The synthetic ground cover materials must not contain material from recycled tyres (SBR).

b) Surfaces must not consist of material with loose infill of plastic or rubber granules.

c) Granule catchers or other systems for microplastic retention must be installed in drains adjacent to the materials.

* *Due to legislation, municipal requirements, or requirements from the procurer.*

** *The enclosure must have openings accessible for persons with disabilities.*

Examples of plastic and rubber surfaces to which this requirement apply are artificial turf, mats, tiles or in situ cast surfaces made from plastic or rubber. Fibres, chips, or granules of renewable materials with a synthetic binding agent or cover are also subject to the requirement.

Materials in artificial turf, mats, tiles and granulate must be declared according to O33. Binding agents and glue used outdoors for installation are exempt from the chemical requirements.

✉ Situation plan showing the use of synthetic ground cover materials and accessible surfaces on playgrounds and outdoor areas.

✉ Drawings where the fall zone is defined according to EN 1176 and EN 1177.

✉ For multisport pitch in a school yard: Reference to accessibility requirements: legislation, requirements from municipality or procurer. Product sheet for the small enclosed/multisport pitch.

✉ Product sheets or other documentation showing compliance with parts a), b) and c).

✉ Declaration Prohibited substances. The declaration is done by the manufacturer through the web portal SCDP.

8.4 Construction products – ingoing substances and emissions

O33 Excluded substances in construction products, construction goods and materials

The requirement applies to the following product categories:

1. Sealing products, including membranes, tape and sealing collars on walls, foundation, and roofing, which are not classified as chemical products.
2. Thermal, acoustic, and technical insulation.
3. Interior and exterior building panels. Does not include panels of solid wood, laminated timber, veneer, OSB, plywood, MDF/HDF, chipboard, HPL, CPL and compact laminates, which are regulated in requirement O35.
4. Heavy current cables and electrical conduits*
5. Wood that is preservative-treated or chemically modified as protection from rot, blue stain, and mould (see O30 for restrictions on use).
6. Wood plastic composite (WPC).
7. Plastic coverings for floors, ceilings, and walls for interior use.
8. Textile coverings for floors, ceilings, and walls.
9. Artificial turf, mats, tiles and granulate used in impact attenuating outdoor surfaces as defined in O32.

The requirement does not include data, telephone, and TV cables. Cables that arrive at the construction site together with electric appliances, such as lifts, white goods, pumps, and fans are not subject to this requirement.

In the construction products and materials mentioned above, the following substances must not be an ingoing substance in the product. Ingoing substance

means all substances in the construction product that are present in concentrations higher than 100 ppm (0.010 w%, 100 mg/kg).

- Substances on the REACH Candidate list of SVHC
- Substances evaluated by the EU to be persistent, bioaccumulative, and toxic (PBT) or very persistent and very bioaccumulative (vPvB), in accordance with the criteria in Annex XIII of REACH.
- Substances classified as carcinogenic, mutagenic, or toxic for reproduction (CMR) Category 1A or 1B.
- Endocrine disruptors: Substances on the EU member state initiative "Endocrine Disruptor Lists", List I, II and III, see the following links.
- https://edlists.org/the-ed-lists/list-i-substances-identified-as-endocrine-disruptors-by-the-eu
- https://edlists.org/the-ed-lists/list-ii-substances-under-eu-investigation-endocrine-disruption
- https://edlists.org/the-ed-lists/list-iii-substances-identified-as-endocrine-disruptors-by-participating-national-authorities

A substance that is transferred to one of the corresponding sublists called "Substances no longer on list" and no longer appears on any of Lists I–III, is no longer excluded. The exception is those substances on sublist II that were evaluated under a regulation or directive that does not have provisions for identifying EDs (e.g., the Cosmetics Regulation, etc.). For those substances, ED properties may still have been confirmed or suspected. Nordic Ecolabelling will evaluate the circumstances case-by-case, based on the background information indicated in sublist III.

In addition, the following individual substances and substance groups are prohibited or restricted. There may be an overlap between the substances listed below and substances categorised above.

- Short-chain chlorinated paraffins (C10-C13) and medium-chain chlorinated paraffins (C14-C17).
- Perfluoroalkyl and polyfluoroalkyl substances (PFASs)
- Alkylphenols, alkylphenol ethoxylates (APEO) and other alkylphenol derivates (APD).
- Brominated flame retardants.
- Phthalates (Esters of phthalic acid (orthophthalic acid/phthalic acid/1,2-benzene dicarboxylic acid).
- The heavy metals lead, cadmium, arsenic, chromium (VI), mercury and their compounds.
- Bisphenol A (CAS no. 80-05-7), bisphenol S (CAS no. 80-09-1) and bisphenol F (CAS no. 620-92-8).
- Boric acid, sodium perborate, perboric acid, sodium borate (borax) and any other boron compounds classed as carcinogenic, mutagenic or reprotoxic in category 1A/1B/2/Lact.
- Organotin compounds.

Exemptions:

- The material in (electrical) conduits* may contain brominated flame retardants provided that the following limits are fulfilled: Bromine content (Br) ≤0.15%, chlorine content (Cl) ≤0.15%, total content: bromine content (Br) + chlorine content (Cl) ≤0.2%. The content must be verified using ion chromatography (IC) according to the methods in EN 14582 or modified IC methods according to EN50642.

- Classification H360 due to 2-ethylhexanoic acid (CAS No. 149-57-5) is exempted in preservative treated wood if the pH value is 9.5 or higher in the wood preservative liquid and if the concentration is <1000 ppm (0.1%) in the finished preservative treated wood. See requirement O22 for restrictions.
- Classification H360 for propiconazole (CAS No. 60207-90-1) in preservative treated wood used in windows if the concentration is <500 ppm (0.05%) in the finished preservative treated wood. See requirement O22 for restrictions.

Declaration "Prohibited substances". The declaration is done by the manufacturer of the construction product through the web portal SCDP.

Construction product declaration or corresponding if available for the product.

O34 Antimicrobial surface treatments

When installing new materials, the applicant must ensure that nanoparticles (see definitions) and biocide treatments are not used in production of the following goods and materials, with the purpose to create an antibacterial or antiviral surface or effect. Declaration "Antimicrobial surface treatments" must be used.

The requirement applies to the following construction products, construction goods or materials:

- Flooring and floor coverings.
- Wall coverings in ceramic material or stone.
- Kitchen and bathroom fittings such as worktops, splashbacks, cabinet fronts, kitchen sinks, mirrors, shower walls, sanitary appliances (WC, urinal, bath, shower, washbasin, sink, bidet etc.)
- White goods* (air filters and door gaskets are exempted).
- Ventilation filters and textile ducts/diffusers.
- Waste disposal units.

** The white goods covered by this requirement are the same types that are subject to requirements in O16 Energy efficient white goods.*

O35 Declaration "Antimicrobial surface treatments" from the applicant confirming compliance with the requirement concerning antibacterial/antiviral surfaces.Formaldehyde emissions

The requirement covers all wood-based or laminate panels and boards for indoor use, containing formaldehyde-based additives, such as building panels (raw or surface treated), panels in floors, panels in doors* or other fitments as well as mouldings, baseboards, and frames. Permanently installed fittings, furniture, and trimmings as well as loose fittings and furniture (e.g., wardrobes and lockers) that are included in the construction project are subject to this requirement.

The requirement does not apply to panels solely marketed as facade panels, solid wooden worktops or fixture details present in a very limited extent such as an individual hat or shoe shelf.

The average emission of formaldehyde must not exceed the limit values for the relevant test method according to Table 11.

** For Finland, apartment doors that are fire-protected according to EN16034 instead of the emission limit value in the table above must comply with M1.*

Table 11 Threshold limits for formaldehyde emissions

Test method	EN 717-1	EN 16516
MDF	0.09 mg/m^3	0.14 mg/m^{3**}
Other panels/boards/mouldings/beams/columns (including glulam, CLT, particle boards, flaxboards, chipboards, fibreboards OSB etc.)	0.07 mg/m^3	0.14 mg/m^{3**}
Other panels/mouldings/fitments than wood Including high pressure laminates (HPL), continuous pressure laminates (CPL) and compact laminates	NA	0.03 mg/m^3

If the panel is covered by e.g., melamine or laminate, it is the complete product with covering that should be tested. If a fitment consists of more than one panel, the complete product can be tested, or the panels can be tested separately.

Analysis methods other than those stated in the above table can be used, provided that the correlation between the testing methods can be verified by an independent third party.

***For wood-based boards a conversion factor of 1.6 can be used for conversion from EN 717-1 to EN 16516, according to Wilke and Jann[7].*

If legislation is introduced or tightened and becomes tighter than Nordic Ecolabelling's requirement levels for formaldehyde during the term of validity of these criteria, this requirement will be adjusted.

⇪ Analysis report including measurement methods, measurement results and measurement frequency. It must be clearly stated which method has been used, who carried out the analyses and that the testing institution is an independent third party. Test methods other than those specified may be used if there is correlation between test methods and this can be confirmed by a competent third party. The documentation is uploaded by the manufacturer in the web portal SCDP.

8.5 Ecolabelled products

O36 Ecolabelled products

Nordic Swan Ecolabelled or EU Ecolabelled products must be used in the renovation project. The following applies:

1. It must be identified which of the product categories listed in table 12 that are used in the specific renovation project.
2. Half of the product categories identified in 1) must fulfil the following (maximum 4 product categories need to be accounted for):
    - >50% of the need for products within the specific product categories must be covered by Ecolabelled products.*

[7] Comparison of formaldehyde concentrations in emission test chambers using EN 717-1 and EN 16516, Indoor Air Conference 2018, July 22-27, Philadelphia, USA. Olaf Wilke, Oliver Jann.

Table 12 Product categories for ecolabelled products.

Product category
Construction panels for outdoor use
Facade panels
Construction panels for indoor use.
Mouldings for indoor use
Flooring (visible layer, excluding tiles)
Tiles (floors and walls)
Bathroom fittings (front, frames and countertops)
Wardrobes
Kitchens (front, frames and countertops)
Windows and window doors
Exterior doors
Indoor doors
Outdoor furniture
Playground and park equipment
Stove/fireplace
Durable wood, including cladding and facade materials
Indoor paint
Indoor fillers
Outdoor paint
Sealants
Adhesives for glass felt and wallpaper
Microdispers
Other chemical building products
Other products

[*] *The products and amounts used can be documented by e.g. invoices and documentation/calculations of the amounts of products needed in the project.*

✉ List of the product categories used in the renovation project (based on the list in table 12).

✉ Documentation that minimum half of the product need in the relevant product categories is covered by ecolabelled products.

9 Wood raw materials

O37 Prohibited and restricted tree species

This requirement applies to all wood-based products used in the Nordic Swan Ecolabelled renovation of the building, supplementary buildings, and outdoor areas. The requirement also applies to wood-based products used in construction but not incorporated in the building, such as wood in casting moulds.

Nordic Ecolabelling's list of restricted tree species[*] consists of virgin tree species listed on:

a) CITES (Appendices I, II and III)

b) IUCN red list, categorised as CR, EN and VU

c) Rainforest Foundation Norway's tree list

d) Siberian larch (originated in forests outside the EU)

Tree species listed on a) CITES (Appendices I, II and III) **are not permitted.**

Exemption applies for Eucalyptus and Acasia used in production of wood- and paper-based construction boards and panels (e.g. fiberboards, particle boards, MDF, OSB, HPL, LPL, CPL etc.). Fibre raw materials from eucalyptus/acacia must be a minimum of 70% certified, see requirement O38.

Tree species listed on either b), c) or d) **may be used** if they meet all the following requirements:

- The tree species do not originate from an area/region where it is IUCN red listed, categorised as CR, EN or VU.
- The tree species do not originate from an Intact Forest Landscape (IFL), defined in the World's IFL 2000 map in Google Earth http://www.intactforests.org/world.map.html.
- The tree species shall originate from an FSC or PEFC certified forest/plantation and shall be covered by a valid FSC/PEFC Chain of Custody certificate documented/controlled as FSC or PEFC 100% through the FSC transfer method or PEFC physical separation method.
- Tree species grown in plantations shall also originate from a FSC or PEFC certified forest/plantation established before 1994.

** The list of restricted tree species is located on the website: https://www.nordic-ecolabel.org/declare-items/pulp-and-paper/forestry-requirements/forestry-requirements-2020/*

The applicant makes a declaration for the whole project.

The supplier makes the declaration if the wood-based products are subject to declaration in the Supply Chain Declaration Portal.

☒ Declaration Prohibited and restricted tree species that tree species listed in a–d are not used in the Nordic Swan Ecolabelled building.

If species from the lists b, c or d are used:

☒ If a tree species is listed in either b, c or d, the supplier is required to present a valid FSC/PEFC Chain of Custody certificate that covers the specific tree species and demonstrates that the wood is controlled as FSC or PEFC 100% through the FSC transfer method or PEFC physical separation method.

☒ If a tree species is listed in either b, c or d, the supplier is required to document full traceability back to the forest/certified forest unit, thereby demonstrating that:

- The tree species do not originate from an area/region where it is IUCN red listed, categorised as CR, EN or VU.
- The tree species do not originate from Intact Forest Landscape (IFL), defined in the World's IFL 2000 map in Google Earth http://www.intactforests.org/world.webmap.html.
- For plantations, the applicant/manufacturer/supplier is required to document that the tree species does not originate from FSC or PEFC certified plantations established after 1994.

O38 Wood and bamboo, traceability, and certification

This requirement applies to the following construction elements of solid wood, glulam, LVL, bamboo, plywood, veneer, or particle/fibre board used in the

construction of the Nordic Swan Ecolabel renovated building and supplementary buildings:

- Frames, trusses, studs, and joists used in the wooden structure of the building (roof, walls, and floors)
- Underlay on roofs, walls, and floors such as plywood, particle boards, MDF, OSB, tongue-and-groove and rafters
- Interior panels
- Exterior cladding and facade panels
- Timber for balcony, terrace, decking, veranda and fences
- Wooden floors

If the applicant wants to include other building parts than the above listed in the calculation of certified wood raw materials, e.g., windows, this includes the total volume of wood used in that building part throughout the building.

Nordic Swan Ecolabelled and EU ecolabel products can be excluded from the calculation.

Name of tree species

The applicant/supplier must state the name (species name) of the wood, raw material or bamboo used in the Nordic Swan Ecolabelled renovation.

Chain of Custody certification

All the above-mentioned construction elements of wood raw materials and bamboo used in the Nordic Swan Ecolabel renovation must be covered by chain of custody certificates issued by FSC or PEFC.

The supplier of wood raw materials/bamboo materials must have valid Chain of Custody (CoC) certification under the FSC/PEFC schemes.

Suppliers who only deliver non-certified recycled material to the Nordic Swan Ecolabelled renovation are exempted from the requirement for Chain of Custody certification. For a definition of recycled material, see below*.

As an exemption to the above, a supplier (e.g., a joinery workshop) of the applicant that does not have FSC/PEFC CoC certification may also be approved. This is subject to a guarantee from the supplier that the wood raw materials are purchased from a CoC certified supplier of wood that can prove that the wood raw materials comply with the requirements stated here. The supplier must guarantee that the certified wood is sold to the applicant of the Nordic Swan Ecolabelled renovation. The applicant must have an agreement with the supplier which describes how the supplier guarantees that the certified timber will be delivered to the applicant. The agreement shall state that the supplier is obliged to report to the applicant when changing wood supplier.

Certified wood raw materials and bamboo

A minimum of 70% by weight of above-mentioned construction elements from wood raw materials and bamboo used in the Nordic Swan Ecolabelled renovation must originate from forests managed according to sustainable forest management principles issued by FSC or PEFC and meet the requirements set out by the FSC or PEFC Chain of Custody schemes or be recycled material*.

The remaining uncertified proportion of wood raw material must be covered by the FSC/PEFC control schemes regarding FSC controlled wood/PEFC controlled or be recycled material*.

Nordic Ecolabelling considers products from primary wood processing industries (sawdust, wood chips, bark, etc.) or residues from forestry (bark, branches, roots, etc.) as recycled material*.

* *Recycled material is defined according to ISO 14021 in the categories of pre-consumer and post-consumer.*

✉ The names (species names) of the wood raw materials and bamboo that are used.

✉ Valid FSC/PEFC Chain of Custody certificate from all suppliers of wood-based products, covering all wood materials and bamboo used in the Nordic Swan Ecolabelled renovation. Alternatively, a link to the certificate holder's valid certificate information in the FSC/PEFC certificate database.

✉ Documentation alternative 1: A summary showing i) the total quantity of wood raw materials and ii) the total percentage of certified wood raw material or recycled material used in the project. Copy of invoice(s) which confirms the FSC/PEFC status of the products and the FSC/PEFC certificate number of the immediate supplier to confirm the proportion of certified wood raw materials or recycled materials purchased for the project.

✉ Documentation alternative 2: An aggregated list from each supplier (compilation of all wood raw material deliveries to the project containing information on: CoC code, name of tree species, type of product items, FSC/PEFC claims for each product item, quantities of wood raw materials and percentage of certified/recycled wood and the invoice number (reference)) can be used as a basis for the summary. Nordic Ecolabelling may ask for copies of invoices to confirm the proportion of certified timber purchased for the Nordic Swan Ecolabelled frenovation.

✉ If the applicant does not use a CoC certified supplier, the supplier shall present i) invoices for the wood raw materials in question from the CoC certified supplier and ii) a valid certificate which must be in accordance with the invoice(s). The invoice must state the volume of certified wood raw material and certification number. The applicant must have a documented agreement with the supplier which describes how the supplier guarantees that the specified, certified wood raw material on the invoice is delivered to the project. The agreement shall also state that the supplier is obliged to report any change in the source of the wood raw material. Nordic Ecolabelling may ask for further information.

10 Quality management of the demolition and construction process

O39 Moisture prevention

Moisture prevention in the renovation project must be documented in line with sections A to C.

Proof of adherence to relevant national industry standards can be used as part of the documentation.

A. Plan for moisture prevention

A plan for moisture prevention must be submitted to Nordic Ecolabelling before construction work begins. The project-specific plan for moisture prevention must include the following, when relevant for the project:

- List of relevant moisture-sensitive materials and constructions.
- Weather protection of materials/elements during transport and storage.

- Plan for closure of the building and weather protection of relevant constructions.
- Description of procedures and methods for drying out the building.
- Description of how it is ensured that subcontractors adhere to applicant's moisture prevention plan.
- Description of the requirements set for manufacturers of prefabricated elements/modules in relation to moisture prevention during manufacturing, transport, and installation.
- Description of design and quality measures in water and sewage installations, reducing the risk of damage by drip leakage during the building's use phase.

B. Plan for moisture measurements

A plan for moisture measurements must be made according to the following:

- Moisture measurements must be performed for all relevant materials and constructions in the building, according to the national legislation or official guidelines. The relevant structures and materials must be listed in the plan.
- In concrete-based materials that are covered by moisture-sensitive materials (e.g., parquet) the relative humidity must be verified by borehole/specimen measurements.
- Measured values must be below requirements from the manufacturer of surface materials (e.g., linoleum, parquet, etc.) or official national industry guidelines. Relevant target values must be stated.
- Measurement results must be documented and be available to Nordic Ecolabelling upon request.

C. Coordinator for moisture management

A moisture coordinator must monitor adherence to the moisture prevention plan. The coordinator must be educated in moisture prevention in buildings and have at least 2 years' experience in construction site moisture management/control or moisture damage investigations.

✉ A. Plan for moisture prevention.

✉ B. Plan for moisture measurements.

✉ B. Monitoring reports and measurement results must be available to Nordic Ecolabelling upon request.

✉ C. Competence description of the moisture coordinator such as CV.

O40 Compliance with material and chemical requirements

The applicant must ensure fulfilment of all material and chemical requirements. A routine must be established for the whole construction process, including:

- Division of responsibilities for the material requirements (O17-O36) in the design phase, construction phase(s) and procurement.
- Instructions for subcontractors, e.g., via agreements and control plans.
- Procedure for construction site inspections that covers:

- Frequency of internal inspections/rounds during the construction period.
- Extent of the internal inspections (minimum: material storage, active construction site and area for construction waste).
- Documentation for internal inspections: inspected materials and their compliance with material requirements in the criteria must be documented, e.g., in the self-inspection system or inspection reports.

✉ Routines that as a minimum document the bullets above.

✉ Inspection reports must be documented and be available to Nordic Ecolabelling upon request.

O41 Information for those involved in the demolition and construction processes

Employees involved in the demolition and construction processes, including supervisors, site managers, project leaders, procurement manager, subcontractors etc., must have the relevant knowledge to be able to ensure fulfilment of the requirements in conjunction with the project design and construction of a Nordic Swan Ecolabelled renovated building.

The routines for the training and information programme must include at least the following:

- Content and scope of the training/information, depending on the participant's role.
- Frequency of the training/information.
- Division of responsibilities.

The applicant must ensure that training and information are available in relevant languages.

✉ Routine in the quality management system and training programme.

✉ List of participants that have completed the training programme must be available.

O42 The contractor's self-monitoring system (construction phase)

To ensure compliance with the building legislation the contractor must have a documented robust quality self-monitoring system during the entire construction period. As a minimum, the self-monitoring system must include:

- Overview of chain of responsibility for the control measures.
- System for management of documents, including archiving and revised versions of drawings.
- System for checks on material deliveries at time of receipt.
- System for process control, defining control levels and frequency of control for subcontractors, consultants, and the construction site management.
- The licensee's procedures for control of the quality of the prefabricated elements and compliance with the requirements of the Nordic Swan Ecolabel.
- Procedure for the final inspection (municipality and internal inspection) and handover of the building.

Nordic Ecolabelling must have access to the quality self-monitoring system through the entire construction process. This can be handled in the contractor's digital quality assurance system or manually at audits.

✉ Routines describing the self-inspection system according to the requirement.

O43 Planned changes and non-conformities

Planned changes and unforeseen non-conformities affecting Nordic Ecolabelling's requirements must be reported to Nordic Ecolabelling immediately. This must be done in accordance with the licensee's commitment.

✉ Routine(s) describing how planned changes and unforeseen non-conformities will be handled.

✉ In the event of changes or unforeseen nonconformities: Written report on the change or non-conformity.

11 Definitions

Definition	Description
Chemical products	A chemical product is a substance or a mixture of two or more substances, in liquid, gaseous or solid form, which are used on a construction site or by a manufacturer of prefabricated building components. Chemical products both for indoor and outdoor use are covered by the requirements. Nordic Ecolabelling does not set chemical requirements for cement or concrete, nor for metal alloys such as steel or brass.
Construction products	Products used in the construction of buildings, for example wall elements, flooring, power cables, doors, thermal insulation etc. In EU regulation No 305/2011, a construction product is defined as "any product or kit which is produced and placed on the market for incorporation in a permanent manner in construction works or parts thereof and the performance of which has an effect on the performance of the construction works with respect to the basic requirements for construction works".
EPD	A product specific EPD according to the standard ISO 14025 and EN 15804 is a third-party verified document based on product category rules (PCR) and life cycle assessment (LCA). A daughter EPD is based on a third-party verified EPD but can be adapted to small variations in the composition of the product.
EU Taxonomy	In these criteria, references to the "EU Taxonomy" means the Delegated Act on the objective climate change mitigation (Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021). Specifically, reference is made to the activity 7.2 " Renovation of existing buildings".
Facade	The principal front of a building, that faces on to a street or open space.
Heavy current cables	Heavy current cables/Electricity cables for nominal voltage equivalent to or more than 50 V AC voltage or 120 V DC voltage. The definition does not include data, telephone, and TV cables. Cables that arrive at the construction site together with electric appliances, such as lifts, white goods, pumps, and fans are not subject to material requirements.
Impurities in chemical products	Residuals, pollutants, contaminants etc. from production, incl. production of raw materials that remain in the raw material/ingredient and/or in the chemical product in concentrations of less than 1000 ppm (0.100 w-%, 1000 mg/kg) in the chemical product. Examples of impurities are residues of the following: Residues or reagents incl. residues of monomers, catalysts, by-products, scavengers, and detergents for production equipment and carry-over from other or previous production lines.
Ingoing substances	Chemical products: All substances in the chemical product, including additives (e.g., preservatives and stabilisers) in the raw materials. Substances known to be released from ingoing substances (e.g., formaldehyde, arylamine, in situ-generated preservatives) are also regarded as ingoing substances. Construction products: All substances in the construction product that are present in concentrations higher than 100 ppm (0.010 w-%, 100 mg/kg).

Nanomaterial	Nanomaterials/-particles are defined according to the EU Commission Recommendation on the Definition of Nanomaterial (2022/C 229/01): 'Nanomaterial' means a natural, incidental or manufactured material consisting of solid particles that are present, either on their own or as identifiable constituent particles in aggregates or agglomerates, and where 50% or more of these particles in the number-based size distribution fulfil at least one of the following conditions: (a) one or more external dimensions of the particle are in the size range 1 nm to 100 nm; (b) the particle has an elongated shape, such as a rod, fibre or tube, where two external dimensions are smaller than 1 nm and the other dimension is larger than 100 nm; (c) the particle has a plate-like shape, where one external dimension is smaller than 1 nm and the other dimensions are larger than 100 nm.
PED (Primary Energy Demand)	Defined according to the national implementation of the EU Directive 2010/31/EU.
Post-consumer/commercial recycled material	“Post-consumer” is defined as material generated by households or commercial, industrial, or institutional facilities in their role as end-users of a product that can no longer be used for its intended purpose. This includes materials from the distribution chain.
Pre-consumer/commercial recycled material	Material that is reclaimed from the waste stream during a manufacturing process. Production waste (scrap, rework, regrind) that can be returned directly to the same process in which it was generated is not counted as recycled pre-consumer material. Nordic Ecolabelling defines rework, regrind or scrap, that cannot be reused directly in the same process, but requires reprocessing (e.g., sorting, reclamation and granulation) before it can be reused, to be pre-consumer material. This is regardless of whether it is produced in-house or externally.
Preservative treated wood	Wood that has been pressure impregnated, or vacuum impregnated with a wood preservative liquid. Wood that is surface treated (e.g. flow coated, spray coated, or dip coated) with wood preservative is not considered as preservative treated in these criteria. Note that this definition of preservative treated wood differs from how the term is used in various industries.
Recycled material	Recycled material is defined according to ISO14021 in the categories of pre-consumer and post-consumer and includes both mechanical and chemical recycling.
Reused materials	Reuse of a material means using it again for the same purpose for which it was originally made. The original product is usually not altered in any significant way before being used again. These criteria also include use of a certain material again, but in a manner different to what it was originally intended for. The original product is left mostly intact, utilising its shape, form and material for a different purpose.
Selective demolition	In selective demolition the building is taken down in such a way that the materials can be sorted correctly and subsequently used the “best possible” way. At the same time the materials which contain problematic amounts of environmentally harmful substances are sorted out and handled. “Best possible” means that the materials are used as close to their original function and thus as high up in the waste hierarchy as possible, taking into account an overall assessment of costs and environmental effects. Demolition, where the building is first demolished and the materials are then sorted before disposal from the demolition site, is not considered selective demolition. Further details can be found in the report by Miljøstyrelsen Denmark: Selektiv nedrivning i byggebranchen (https://www2.mst.dk/Udgiv/publikationer/2022/02/978-87-7038-359-2.pdf).
Supplementary buildings	Supplementary buildings are refusing depots, bicycle sheds, garages (both as a separate structure or connected to the building) and similar constructions.
Take back systems	An initiative organized by the manufacturer or retailer, to collect used products or materials from the construction sites and module manufacturers and reintroduce them to the original processing and manufacturing cycle. A company may implement this program in collaboration with end-of-life logistics and material processing firms.
Technical service areas	Technical service areas are fan rooms, substations, lift shafts, machine rooms, electrical rooms, and other areas to which unauthorised persons do not have access. The following are not service areas: all living areas and communal areas such as dressing rooms, shower rooms, stairways, entrance areas, storerooms, corridors in basements/galleries, pram rooms and bicycle rooms. Installation shafts.

Regulations for the Nordic Ecolabelling of buildings

When the Nordic Swan Ecolabel is used on 102 Renovation of buildings use the licence number and a descriptive subtext shall be included as follows:

- **Renovation of buildings 20XY**

More information on graphical guidelines, regulations and fees can be found at www.nordic-ecolabel.org/regulations/

Follow-up inspections

Nordic Ecolabelling may decide to check whether the renovated building fulfils Nordic Ecolabelling requirements during the licence period. This may involve a site visit, random sampling, or similar test.

The licence may be revoked if it is evident that licensee does not meet the requirements.

Criteria version history

Nordic Ecolabelling adopted version 2.0 of the criteria for Nordic Ecolabelling for Renovation of buildings on the 1 of March 2024. The criteria are valid from 2024-03-01 until 2027-09-30.

On February 20, 2024 Nordic Ecolabelling decided to extend the scope of the product group definition to include additional building types. As a consequence, requirements O1, O13 and O15 have been updated with requirements and alternatives for these building types and the definitions Homes for the elderly and Homes for persons with disabilities have been removed. Editorial changes were made in O29.

The new version of the criteria is 2.1.

On April 23, 2024, Nordic Ecolabelling decided to exempt outdoor glazing beads from O29.

On April 30, 2024, Nordic Ecolabelling decided on an exemption for BHT in O25.

On June 25, 2024, Nordic Ecolabelling decided to limit the scope of waste reporting from module factories in O11. Examples have been added to the background text. New exemptions for melamine in intumescent steel paints were added to O21, O22 and O25. An exemption for use of PU foam in Finland was implemented in O25.

On September 10, 2024, Nordic Ecolabelling decided to introduce an exemption in O37 for eucalyptus and acacia in wood- and paper based construction boards.

On December 10, 2024, Nordic Ecolabelling decided to introduce new exemptions for respirable crystalline silica/quartz in O22 and DBNPA and BHT in O25.

On April 22, 2025, Nordic Ecolabelling decided to introduce two exemptions in O33 for the use of biocides in preservative treated wood. A definition of which types of preservative treated wood are subject to requirements in O30 and O33 was added in the definitions chapter.

Clarifications and editorial changes have been made in: O16, O21, O22, O25, O28, O29, O30, O35 and O38.

Some of the appendices have been moved to a separate document and got new naming. References throughout the criteria and background documents have been changed to match.

The new version of the criteria is 2.2.

Appendix Hazardous substances in reused construction products

- Content of the following substances must not exceed the given threshold limits below.
- The level of substances must, in addition, always comply with the national threshold limits given in the national legislation and guidelines.
- Substances not specified in the following list but regulated in national legislation must also be documented if relevant to the material.

Substance	Limit	Example of materials/products
Asbestos	0 mg/kg	Facade and roof panels, electrical conduits, insulation materials
CFC, chlorofluorocarbons	100 mg/kg	Insulation materials and foams
Substances classified as hazardous waste according to national legislation and guidelines.	According to national legislation and guidelines	
Cadmium, arsenic, copper, chromium, lead, mercury, and their compounds	100 mg/kg	PVC/plastic, products with paint layer
phthalates DEHP, BBP, DBP and DIBP	1.000 mg/kg	PVC/plastic/rubber
Halogenated flame retardants	100 mg/kg	Rubber/plastic
Chlorinated paraffins Short-chained chlorinated paraffins (SCCPs, C10-C13) and medium-chained chlorinated paraffins (MCCPs, C14-C17)	100 mg/kg	Rubber/plastic/products with paint layer
Nonyl- and octylphenols	1.000 mg/kg	Flooring and products with paint layers
PCBs (polychlorinated biphenyls)	0.1 mg/kg internal and 1 mg/kg external*	Flooring, products with paint layers, concrete
PFAS	100 mg/kg	Impregnation of rugs, fire extinguisher, paint

* *Measured inside the material or in a finish, depending on where the concentration was deemed to be the highest. The limit is the one used in the Danish regulation "Restproduktbekendtgørelsen" from December 2016.*

Appendix Energy calculation

Information about the energy calculation for verification of requirement O7.

- Denmark: BE18 or equivalent.
- Norway: NS 3031.
- Finland: Ministry of the Environment's regulation for buildings' energy performance or equivalent.
- Iceland: Calculations shall be made in accordance with BRG # 112 and prepared using a dynamic energy calculation tool for energy calculations of buildings.
- Sweden: The version of BBR stated in the building permit must be followed. Valid regulation BEN and national practice SVEBY must be adhered to. Nordic Ecolabelling does not set requirements for specific simulation software, but to achieve energy calculations of good quality the following applies:
    - The calculation must be made using dynamic energy calculation software, i.e., software that takes account of variations in e.g., temperature over time. Examples of dynamic energy calculation software are IDA ICE, VIP+ and BV2. Other software that uses a dynamic simulation can be accepted after consultation with Nordic Ecolabelling.
    - For small houses (småhus) with a wooden carcass, using the calculation tool TMF Energi is acceptable.
    - The energy calculation tool must be adapted to the type of building.
    - Standard values may not be used for thermal bridges. Thermal bridges at connection points such as outer wall-window; outer wall-eaves; outer wall, between joists and external walls-ground slabs must instead be calculated according to the Swedish standard SS EN ISO 10211:2017 Thermal bridges in building construction – Heat flows and surface temperatures – Detailed calculations.
    - Data concerning U values and g values for the chosen windows and window frames must be used.
    - Air gaps with facade trim are not included in the calculation of the outer wall's U value.
    - Cold roof space resistance must follow Table 3 of SS-EN ISO 6946 Building components and building elements – Thermal resistance and thermal transmittance – Calculation method.

- User input data must be taken from the current edition of BEN, alternatively Sveby User Related Input Data for homes, or relevant parts of Sveby User Related Input Data for offices.

- No deductions may be made for domestic hot water consumption with individual measurement.

- If a room is optional, it must not be included to raise the number of occupants and the corresponding heat contribution.

- COP for heat pump and effectiveness of heat exchangers should be based on the annual value with relative humidity taken into account.

- When calculating the building's energy use for verification of the building's primary energy number according to BBR, appropriate margins must be applied so that requirement O3 is met even when the energy use is measured and normalised. 10% or the methodology used in the report SBUF 13106 can be used as a guideline, but the person performing the energy calculation may use other values when relevant. The choice of margins should be clearly stated and motivated in the report.

Appendix BAT-EAL for energy efficiency (steel)

Measures for efficient energy consumption in steel production

Blast furnaces	BAT is to maintain a smooth, continuous operation of the blast furnace at a steady state to minimise releases and to reduce the likelihood of burden slips. BAT is to use the extracted blast furnace gas as a fuel. BAT is to recover the energy of top blast furnace gas pressure where sufficient top gas pressure and low alkali concentrations are present.
BOF	BAT is to collect, clean and buffer BOF gas for subsequent use as a fuel. BAT is to reduce energy consumption by using ladle-lid systems. BAT is to optimise the process and reduce energy consumption by using a direct tapping process after blowing. BAT is to reduce energy consumption by using continuous near net shape strip casting, if the quality and the product mix of the produced steel grades justify it.

https://eippcb.jrc.ec.europa.eu/sites/default/files/2019-11/IS_Adopted_03_2012.pdf